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THE AMERICAN ENGINEER

MAY, 1935

PUBLISHED BY
THE NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS

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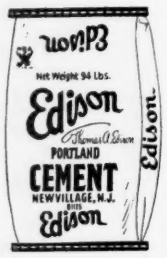

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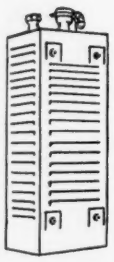

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THE AMERICAN ENGINEER

Published monthly in the interest of the American People and the Engineering Profession
by the National Society of Professional Engineers

Editor—ARTHUR V. SHERIDAN

Associate Editors—ORRIN H. STANLEY
419—City Hall, Portland, Ore.
OTHERS TO BE ANNOUNCED

Business Manager—FREDERICK H. ZURMUHLEN

PUBLISHING AND DISTRIBUTING OFFICES—*Scott Printing Company*
One Sherman Avenue, Jersey City, N. J.
Telephone—Webster 4-3420-1

EDITORIAL AND GENERAL OFFICES
2952 Grand Central Terminal, New York, N. Y.
Telephone—VAnderbilt 3-9152

VOLUME 1 | MAY, 1935 | No. 5

CONTENTS

	Page
Officers—The National Society of Professional Engineers	4
Contract or Relief Work	5
Announcement	6
The New Deal	7
Patronized and Exploited	8
Engineer and Artist	9
Organization Chart	10
Codes for Society	11
Items of General Interest	12
State Activities Reported	13

The American Engineer assumes no responsibility for statements or opinions expressed by contributors whose names identify the source of the same.

Subscription Rates

$1.00 a year, in advance, to members of the National Society of Professional Engineers and its affiliated Societies.
$2.00 a year, in advance, to non-members. Single copies, $0.25.

Entered as second-class matter January 29, 1935, at the post office at Jersey City, New Jersey, under the act of March 3, 1879.

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of
PROFESSIONAL ENGINEERS

Headquarters
National Press Building
Washington, D. C.

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New York City

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1327 City Hall Annex
Philadelphia, Pa.

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CONTRACT OR RELIEF WORK

NON-PRODUCTIVE SYSTEM DANGEROUS

A Conference of Architects, Engineers and Contractors Suggested In Hope of Modifying Present Procedure

THE $4,880,000,000 *work relief measure is now a reality. Of that sum more than* $2,000,000,000 *is to be expended in activities almost entirely dependent upon the services of engineers, architects and superintendents for their accomplishment. What are the methods to be used? How are the direction and control to be determined upon after the allocations leave the various fountain heads at Washington? These are questions which are vital to the accomplishment of the objectives for which this huge appropriation has been set up.*

Accurate data on the subject of employment provided by the expenditure of Federal monies are difficult, if not impossible, to obtain. One investigation made for the purpose of determining the number of persons employed on a relief work basis as compared with that resulting from the use of contract methods indicates that there is a balance of perhaps fifteen to twenty percent in favor of work relief procedure. There are those who will question this. Some will contend the balance is slightly greater and others are convinced that there is no balance in either direction because of the fact that for one project accomplished by the work relief method a number can be effected without additional cost through competitive contracts.

Regardless, however, of the difference in the direction of relief work, which a careful study reveals is at best very small, there is a question of the utmost importance which social administrators seem to forget, viz., the results produced by the two methods of expenditure. For the problems of next year and the years to come this is an important consideration.

No one can question the fact, frankly stated by President Roosevelt himself, that relief work on the whole is non-productive. It is merely an emergency stop gap to prevent misery and discontent. It does not materially enhance the wealth of the country. It is not conducive to a transfer of persons from government to private payrolls. The first step in this direction is overlooked when the contractor is eliminated. Herein lie the great weaknesses of the method. If a nation is to create additional wealth it must direct the efforts of men into channels resulting in the permanent improvement and development of its potentialities. The resources and possibilities provided by nature must be developed in such a fashion to result in permanent values to the nation, the state and the community. Such development cannot be achieved without proper planning and proper execution. Slipshod, haphazard, non-productive endeavors are valueless as public improvements. Do those who are to determine policies and methods appreciate this sufficiently to seek changes in the method of prosecuting work.

Throughout the country, and especially in the East, there is a growing realization of the ultimate advantages of contract work. Where once, not so far back, architects, engineers, contractors and labor leaders made such contentions only to be rebuffed by self-styled social experts, who, on a basis of training and experience are as qualified to pass judgment on organizing and executing work projects as they would be to direct the maneuvers of an army, one now finds officials and civic organizations condemning relief work and petitioning for contract practices.

In the City of New York the President of the Borough of The Bronx is striving to have the administrative board of that City petition President Roosevelt directly in the hope of securing approval to expend its share of federal monies in this manner. Col. William J. Wilgus, who administers the relief work of that City, with approximately one hundred and fifty thousand on the rolls is openly advocating the application of the Contract System. Leslie Johnson, Director of Public Works, who contends that millions have been wasted in western Pennsylvania as a result of the application of work relief method, likewise urges contract procedure. From civic organizations and taxpayer groups are coming vigorous demands for application of the competitive contract system.

The public reaction to the present conditions is a hopeful sign and should encourage architects, engineers and contractors to concentrate their efforts in placing before the nation, not so much the iniquities of past work relief, as, the dangers of continued expenditures along such lines.

The American Engineer suggests to the National Society of Professional Engineers that it consider a conference of architects, engineers and contractors in Washington for the purpose of preparing a plan for submission to the federal authorities. There is every reason to believe that this conference will receive strong support from public and officials throughout the country.

(*Continued on page* 24)

Announcement

SOCIETY HEADQUARTERS

ESTABLISHED AT WASHINGTON

Commencing May 1st, the permanent headquarters of the National Society will be at Washington, D. C. The address is:

NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS
NATIONAL PRESS BUILDING (ROOM 1033)
WASHINGTON, D. C.

The headquarters office will be in charge of Mr. Willard S. Conlon, Treasurer and Acting Secretary of the National Society. Mr. Conlon will give his time and services to the organization as Acting Secretary to take the place of Mr. T. Keith Legaré who served as Executive Secretary until April 15th.

All members of the National Society are cordially invited to make use of the facilities of the Washington office.

D. B. STEINMAN
President

THE NEW DEAL

IS IT TO BE A GESTURE?

AS APPLIED TO ENGINEERING

By GERALD W. KNIGHT

IN making this appeal the writer is inclined to recall the effectiveness of a certain author who, recently addressing a restricted audience, frankly stated that the attitude of its members was snobbish and that while their inhibitions toward the problem of unemployment were understandable they were not in the least admirable. Such a rebuke could in all justification be administered to engineers as a whole.

Whether we approve or not, the old order is passing. This applies within the profession as it does without. Whether the process be one of evolution or revolution depends on those affected. None can fail to appreciate that lack of organization and inept leadership has resulted in making the engineer the most exploited of all persons. Only an articulate and united organization can remedy this condition.

Long has the engineer awaited such an organization. In fact, he has remained patient until negative reactions from the established order convinced him that something had to be done about the situation. When at last aroused, he moved and rejoiced to discover that there was real leadership. Like a prairie fire the movement gathered force as it moved forward. Chapter and state organizations came into being or were revived, and enthusiasm for the betterment of conditions were rekindled. In the hearts of engineers, whose plight was greatest, a new hope was aroused.

He knows what has done it, but will he be content when only a start has been made? Already, expressed misgivings and jealousies from without are red-flagging the way. Already the old order, the mossbacks of the old machine, are saying "Behold, we have the same objectives—It should have been left with us." To be fair to the old order one must admit this sounds militant, and militance was the factor which broke the spell. The minority of men in our profession are still unsold to heroic methods as a means by which to gain our objectives. By far the greater number still cling to their inhibitions. Too many would stand by to see which way the cat jumped, and an equal number would let "George" do it. All, however, will admit that we must have a militant program and a militant leadership.

In the face of such apathy: Shall we carry on or shall we stop and turn the fighting over to the old order, just because it now recognizes that fighters are needed and that fighters can be recruited?

While the writer is not unwilling to submit this question to the old order for an answer which could with accuracy be forecast, he is unwilling, not only, to rob the men who assumed that leadership of the results of their work, but to jeopardize the work so well begun. He feels compelled to go further and say that engineers and architects, are still for the most part at the bottom of the abyss; are still looking to a Moses to lead the way out; are still sure that to swap horses in the middle of the stream is poor business and are convinced that competent leaders in any campaign should be supported. However, there is a technique in fighting for rights and recognition, just as there is in the design of a structure, and having acquired that technique we must not part with it.

The New Deal in engineering calls for procedure predicated upon an appreciation of causes and effects as applied, not to intert masses, but, rather to mobile human forces. For more than half a century the national engineering organizations of this country sat supinely by whilst the cause of modern civilization was being engulfed in the maelstrom of a social order that was builded upon a foundation which did not lend itself to change. The engineer as a social unit in the body politic was of no consequence. He was creating merely at the beck and call of others. His services were so lightly rewarded that he had little opportunity for leisure. He took little part in affairs outside of his livelihood. His value to the community was lost sight of and he worked or not as others decided.

Some twelve or fifteen years ago, after one organization, which made an auspicious start, had fallen into the channel followed by other engineering societies, there came into being the professional movement amongst engineers. Led by individuals whose imagination and whose interest strayed beyond the narrow confines of a technical course, this movement, embracing the social, economic and professional side of engineering, grew steadily. To-day it has spread throughout the country. It has leadership, it has imagination, it has definite objectives. There is every justification for its existence. It has proven its merit and capability. In fact, it has done so well that standpat technical groups now seek to compete with it. This is unfortunate and, in the writer's opinion, unwarranted.

The fight has only begun and it is obvious that to win for all—all must put their shoulders to the wheel, and this includes support from the old order.

Let us be specific. Is this New Deal to be merely a gesture? Shall you or I go back to the men of our profession and say, "We have spent your money to start a campaign and now discover that we were a bit premature. We should have allowed somebody else to do it."

It's about time we got down to brass tacks. In the attempt now being made in behalf of the welfare of professional engineers by a professional organization, either we shall receive the definite opposition of the engineers of the old school or we shall receive their support. There cannot be a middle ground—a neutral zone of uninterested onlookers.

Where are you going to stand?

PATRONIZED AND EXPLOITED

THE ENGINEER A VICTIM OF CUSTOMS AND POLICIES

TRUE FRATERNAL AND PUBLIC SPIRIT A HOPE AROUSED BY NEW ENGINEERING DEAL

By JOSEPH B. DIAMOND

THE article by Professor Le Tellier which appeared in the February edition of The American Engineer is one which should be read carefully and thoughtfully by every engineer. In it the good Professor displays a comprehensive grasp of the problem confronting engineers in the attainment of professional recognition as well as an intimate knowledge of the state of mind which is responsible for the engineers' ineffective approach to this problem.

However, let not those among us who are convinced of the inherent wickedness of militant group action in the economic and political fields be unduly disturbed for the present. Organizing engineers for civil purposes is a difficult task. They seemingly have an inherent aversion to making acquaintance with the so-termed social sciences, feeling that such interests are not for them but rather for others with weaker intellects who are unable to master mechanics, chemistry or electricity. Consequently, they go their way according to the plan they have worked out for themselves, shunning any undue familiarity with social studies on the assumption that such endeavors are not worthy of their steel. Due to their refusal to take account of social forces, they lack the broad sociological outlook requisite for advancement in the complex society in which they live.

Prospective engineers, upon entering college, carefully eschew from their programs, as far as possible, all courses, the subject matter of which is not readily reducible to formulae and numbers. They pay but little attention to such cultural courses as are inflicted upon them in an attempt to broaden their education. Student engineers simply have no time for what they term "bull" courses.

In the crowded curricula of our engineering schools there is really not much opportunity for broadening the students' outlook and such opportunities as do exist are not always taken advantage of by the school faculties. As a result students spend most of their time studying technical subjects under earnest teachers who may be most exacting in their requirements of technical knowledge, but who rarely ever arouse the young men to a consideration of their professional life to come. The students give little or no attention to such questions as—Will there be a demand for our services? Will we be well paid for them? What opportunities will we have for advancement? Will the return on our investment of time and money in educating ourselves become greater as we grow older in the profession or will we be thrown into the discard? What will be our standing in society as compared with that of men in other professions?

Of course, there is a form of activity designed to mold the students' viewpoint as to their professional careers. The neophytes attend lectures and moving pictures to enhance their professional interest, after which they may partake of sandwiches and coffee after the manner of their elders in the profession, who are wont to divert themselves in such wise at their engineering societies. Such innocent diversion is good for both the student engineers and their professional brothers in that it helps keep their minds away from disturbing economic considerations. At their student society meetings, the prospective engineers are regaled with inspirational talks on the maintenance of high technical standards and high standards of professional ethics. If the speaker happens to represent industrial interests which have subsidized the school or which have donated obsolete mechanical or electrical equipment (in return for which the school may have granted an honorary degree to the party responsible for the donation), or if the speaker has the benefit of using the institution as a combined training school and employment agency to supply himself with poorly compensated engineering talent, the speech will be on a so much higher ethical plane, any reference to the economic needs of engineers being only to decry a tendency among a vicious minority to introduce mercenary considerations into the practice of a noble profession. Under such auspices, the young aspirants to engineering fame, with slide rules in their inside pockets and handbooks in their outside ones, puffing thoughtfully on evil-smelling pipes, wend their way slowly across college campuses, headed for their economic slaughter. Upon graduation, those who stand at the head of their classes may be offered the opportunity of employment with one of the large industrial organizations which are on the lookout each year for the cream of the crop of student engineers. It is carefully explained to such students that they can be of no use at all to the company until they go through a course of training, kindly provided by the company at no expense to the young engineers. Not only are they trained at no expense to themselves, but they are actually paid to study under company tutelage; not much, of course; but then the young men must remember that, despite their long years of college training, they are of absolutely no use to the company. If the company has the foresight to designate the young men as "cadet" engineers, as is the practice in some places, the salary can be made perhaps even lower by this final assault on the young men's carefully cultivated inferiority complexes. If these professional novices enter upon a type of work peculiar to the business of their employers, which is sometimes the case in monopolistic industries, they are not apt to complain too loudly in after years if their earnings do not meet their expectations, for their limited possibili-

(*Continued on page* 24)

THE TULANE UNIVERSITY LIBRARY NEW ORLEANS

ENGINEER AND ARTIST

BROTHERS-UNDER-THE-SKIN

By WILFORD S. CONROW
Permission of "Poly-Men"

ENGINEERS who have risen to distinction in their profession are often unusually responsive to excellent works of art, but we hear them express surprise and wonder at such appreciation. They are unaware largely that psychologists have noted the almost identical mental approach to their problems of engineer and artist. Psychologically speaking, engineers and artists are brothers-under-the-skin. In engineering work, unless it be later embellished, the supports of a structure are left bare for all to see. In all great periods of art, proportion and symmetry are derived in painting from a geometric web, which overlying rythms of form, color and expedients that give the illusion of nearby and far-off, conceal from casual view much as clothes conceal the body and flesh of the skeleton. Most of us prefer the comradeship of our living friend to the idea of sitting across the table from his denuded skeleton. So most people continue to be charmed with so-called conservative art and prefer it to the revelations of modernistic works of art, however important the facts disclosed by such adventurings may be to open-minded professional artists.

The present writer, when second in command of the first camouflage unit (the 40th Engineers) in the Fall of 1917, stated something of the above to the Chief of Engineers of the U. S. Army, the late Major General William Murray Black. He accepted the idea that we camoufleurs, largely artists, belonged, logically, in the Corps of Engineers, and spoke to that effect a few days later when addressing a group of the generals in higher command then stationed in Washington.

But has it ever occurred to an engineer that an art school could well have its place in either a great university or in a college of engineering? Here is something that we would discuss dispassionately. We may discover in it real promise of greater achievement.

My friend, the late Professor A. Kingsley Porter of Harvard, stated in Beyond Architecture that the glorious art of the French cathedrals of the twelfth and thirteenth centuries was made possible by the close relations that then existed between the schoolmen, on the one hand, and the master builders, artist sculptors, artist painters, and artist craftsmen, on the other.

I have been told, and it seems probable, that Pericles, Ictinus and Phidias were all trained in the same school and by the same masters. In the Age of Pericles, the head of the state, the chief architect, and the sculptor charged with the embellishment of the Parthenon, man's supreme master work could support each others' efforts sympathetically and intelligently, largely because all three of the leaders understood the necessity of precise knowledge of the mathematics that make the foundation of art and without which art has never made any real progress.

There is a profound substratum today of research and interest among artists devoted to the recovery of the

(*Continued on page* 23)

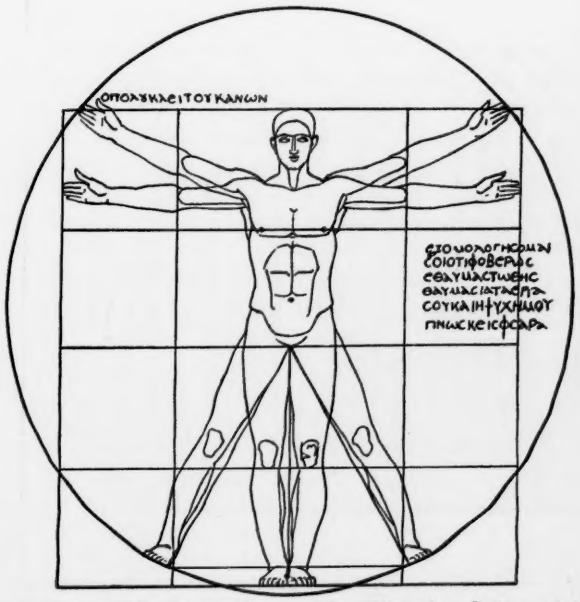
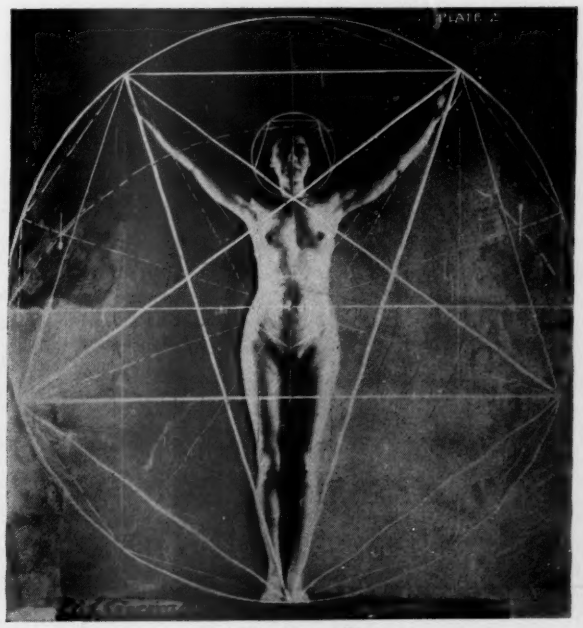
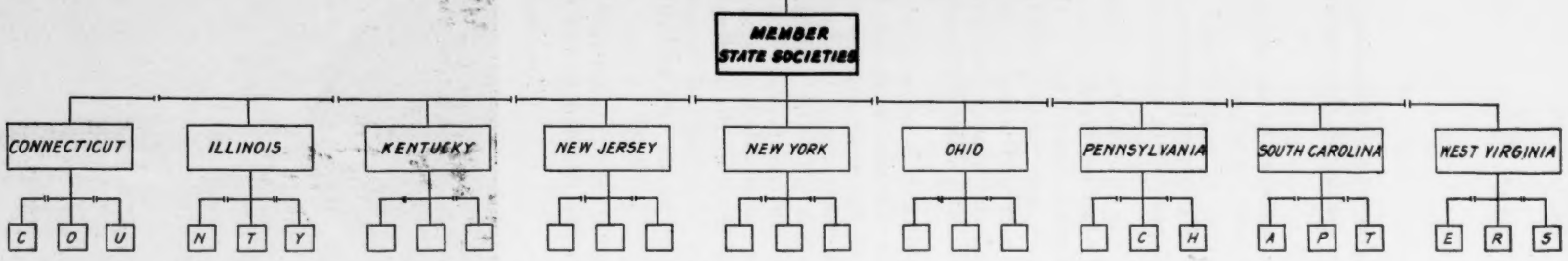


Plate I Leonardo's Conception of the Vitruvian Interpretation of the Greek Canon. Published by Joseph Bonomi, 1873.



The Pentagon Pose

THE NATIONAL SOCIETY OF PROFESSIONAL ENGINEERS



NATIONAL AGENCY

ORGANIZATION
Composed of State Societies of Professional Engineers

MEMBERSHIP (ULTIMATE)
Restricted to licensed or registered professional engineers

OBJECTS
To co-relate State Society activities.
To sponsor all national legislation and activities.
To organize Societies in states where none exist.
To promote uniformity in education, license laws and engineering practice.

ADMINISTRATION
Officers and Board of Directors:
Each state one director for each 1000 members or fraction thereof

FUNCTIONS
To direct activities of State Societies, but not to compel any action or force any policy upon a State Society contrary to the wishes of that organization. The State Society to retain all powers of autonomy.

DUES
State Societies contribute $1.00 per annum per capita to the National Agency

STATE AGENCY

ORGANIZATION
One Society composed of Local Chapters (County Agencies generally)

MEMBERSHIP (ULTIMATE)
Composed of registered or licensed professional engineers.

OBJECTS
To co-ordinate County Chapter activities.
To sponsor all state wide legislation and activities.
To organize Chapters where none exist.
To promote uniformity in education, municipal ordinances and engineering practice.
To enforce laws.
To restrict the use of the term engineer.
To educate the public concerning the engineer.
To take an active interest in public affairs.
To establish and enforce codes of ethics and practice.

ADMINISTRATION
Officers and Board of Directors:
Adequate geographical representation required.

FUNCTIONS
To direct activities of County Chapters.
To formulate plans and programs.
To aid and advise Chapters and Chapter committees.
To promote relations with other professions.

LOCAL AGENCY

ORGANIZATION
County Chapters composed of individuals.

MEMBERSHIP (ULTIMATE)
Composed of licensed or registered professional engineers. (Admission to rest with Chapter)

OBJECTS
To sponsor all local legislation and activities.
To promote friendly relations with other professional groups.
To play an active part in all civic and public matters wherein the engineer and engineering are concerned.
To educate the public concerning the engineer.
To enforce laws and ordinances.
To amplify codes of ethics and practice established by the State Society and to enforce the same.
To restrict the use of the term engineer.
To co-operate with other Chapters.
Not to sponsor legislation of a state wide character.

ADMINISTRATION
Officers and Board of Directors.

DUES
From individual members. Same to be sufficient to conduct the County Chapter after deduction of per capita tax to State Society is paid. Determination of amount a function of the Chapter.

Note:- Membership to be one type only (No classes or grades).
All members to be professional engineers in the eyes of the law.

ORGANIZATION CHART

CODES FOR SOCIETY

Ethics and Practice Suggestions

Submitted for Consideration of Membership

IN order that members of the National Society of Professional Engineers may express views thereon, the following proposals, pertinent to ethics and practice, are submitted for an expression of opinion.

Kindly urge your Chapter and State Society to appoint committees to report.

Introduction: In the interest of the public welfare and the advancement of the engineering profession, the following Codes of Ethics and Practice are subscribed to by the membership of the National Society of Professional Engineers. Violations of these Codes shall be deemed cause for examination of facts in accordance with the provisions of the Constitution of the Society, and, if of sufficient gravity, may, upon recommendation of the Committee on Ethics and Practice and a three-quarters affirmative approval of the Executive Board of the Chapter of which the accused is a member, be considered sufficient cause for expulsion from the Chapter. In the absence of a Chapter the State Society shall exercise the same prerogative and follow the same procedure, and in the absence of a State body, the National Society may take action.

ETHICS

A. *General Principles*—The engineer shall recognize his duty to society, to his profession and to himself. He shall conduct his practice in a manner consistent with the ideals of courtesy, personal honor and the ethics of a learned profession.

B. (1) *Relations With the Public*—The engineer shall at all times and under all conditions seek to promote the public welfare by safeguarding life, health and property.

(2) He shall not become associated with enterprises inimical to the public welfare, nor shall he identify himself with any project not of a legitimate character.

(3) He shall promote and assist endeavors to advise the public of the requirements, responsibilities and accomplishments of the profession and its members; but publicity detrimental to the establishment and recognition of engineering as a learned profession, or which lauds the individual to the disparagement of his fellow practitioners, tends to lower the dignity of the profession and is condemned.

(4) He shall discourage indiscriminate and improper use of the term engineer and shall bear in mind that the aim of engineers should be to restrict the term to those recognized by law as professional men.

(5) He shall promote efforts tending to interest engineers in the humanities with a view to active participation in public affairs.

C. (1) *Relations With Clients and Employers*—The engineer shall at all times advise his client, or employer, of interests, affiliations or prejudices which might influence his judgment or impair the quality of his services.

(2) He shall, to the best of his ability, advise his client or employer, before undertaking any work, of conditions or influences tending to defeat the purposes or objects of such work.

(3) He shall regard as confidential, information or knowledge of a Client's or employer's affairs.

(4) He shall not, in connection with any particular project accept compensation, financial or otherwise, from any person other than client or employer, without consent of all interested parties.

(5) He shall not make a practice of offering professional services or counsel without fee.

D. (1) *Relations With Engineers*—The engineer shall not compete with fellow practitioners on the basis of professional charges, fees or other financial remuneration.

(2) He shall not enter into competition for, nor attempt to secure professional work awarded on a basis of competitive bidding. Such practice is detrimental to the public welfare, degrades the profession and is strongly condemned.

(3) He shall not intentionally injure the reputation, prospects or business, nor shall he anonymously review or criticize the work, of another engineer.

(4) The engineer shall refrain from endorsing or condemning ideas, theories, processes or proposals of fellow practitioners, unless he is especially qualified by reason of his experience to so do, and such action on his part is required because of his business connection with clients, or because said idea, theory or proposal may be considered dangerous or harmful to the engineering profession, or to the public welfare.

(5) He shall not seek to displace a fellow practitioner.

(6) He shall not seek to retain or employ engineers at a remuneration incommensurate with the service rendered.

(7) He shall recognize legally licensed registered practitioners of any State as members of his profession and shall at all times extend courtesies and considerations, not inconsistent with practice nor injurious to personal interests, to fellow engineers.

(8) He shall render assistance and encouragement to engineering students and apprentices and shall recognize the worth of their services.

PRACTICE

E. (1) The engineer is entitled to compensation for all professional advice and service. His charges therefor shall conform to general practice and he shall not render professional services for rates less than those recognized or established as minima.

(*Continued on page* 25)

ITEMS OF GENERAL INTEREST

NEWS, REPORTS, COMMENTS

NATIONAL SOCIETY ACTIVITIES

Correspondents and readers are invited to submit for publication items of interest to the professional engineer of the country. Such material should be forwarded as quickly as possible in order to keep news up to date.

ENGINEER ADMINISTRATORS

Urged for Work Relief

The National Society of Professional Engineers has recorded with the Administration at Washington an urgent recommendation that engineers be included in key positions in the administration of the President's 4.88 billion dollar Work Relief Program. The appointment of engineers on the Boards of the National Emergency Council, the Works Allotment Division and the Progress Division is urged on the basis of the outstanding qualifications of the engineer, by training and lifework, to plan, organize and co-ordinate construction and employment.

The following telegram has been sent to President Roosevelt by the National Society of Professional Engineers:

"Press dispatches indicate that the actual allotment of expenditures under the Work Relief Bill will be made by an Allotment Board under the direct control of the President, this Board to include the heads of the more important agencies through which the expenditures will be made and in addition representatives of business, labor, farming and banking.

While recognizing that some of these members may be engineers, notably General Markham, Chief of Engineers, U. S. Army, the National Society of Professional Engineers strongly urges that at least one prominent engineer to represent the engineering profession in its non-military aspects be placed in one of these key positions as well as on the other two dominating Boards.

This stand is taken because of the important place the engineer occupies in the making and maintenance of prosperity, because of his recognized efficiency as an executive, the most successful executives of our great corporations having been developed from engineers, and because of his dependability.

The engineer is the one man whose professional lifework it is to plan, prepare, and co-ordinate construction and employment. The engineer is the man whose professional function it is to plan and organize work, determine cost, direct labor, build soundly, and get results."

Dr. D. B. Steinman, President of the National Society of Professional Engineers, stated that he had received messages from various parts of the country protesting the omission of the engineer from the administration of a program that is essentially an engineering function. "It is now generally recognized that construction and employment are the essential features of a recovery program," said Dr. Steinman, "and the pre-eminent qualifications of engineers to direct and administer such program should be utilized. The engineering profession has felt the full impact of the

(*Continued on page* 24)

BOUQUETS AND BRICKBATS

What Is Your Opinion

The compensations for filling the role of Editor, especially in the case of a post without emoluments, are indicated in the following communications. One is from a new correspondent; the other from one who is most extravagant in the use of paper and typewriter and who never wearies of the role of the only soldier in time with the music.

"Mr. Arthur V. Sheridan,
Editor, The American Engineer
2952 Grand Central Terminal
New York, N. Y.

College Professors are not the only people taking themselves too seriously. Read the editorial "A new Engineering Deal" in the March number of The American Engineer:

"The problem (in economics) which is purely one of distribution, *cannot be solved by any but engineers.* The future direction of human society, at least until another epoch shall have supplanted him in the order of necessity, is not alone the opportunity of the engineer,—it is his duty to his God, his country and his family."

The serious deliverance of this sort of guff merely serves to raise a laugh at the expense of the Engineer. It should be discouraged by everyone at all interested in the real welfare of the engineering profession."

"Mr. Arthur V. Sheridan, Editor,
The American Engineer,
2952 Grand Central Terminal,
New York, N. Y.
Dear Sir:

Many many congratulations. I could hardly believe that I was reading correctly when I read your editorial "Call for New Courses of Action". If we engineers are made of the stuff you credit us with your clarion call will bring a tremendous and enthusiastic response.

The mixture of idealism, common sense and enlightened self interest really thrilled me. Following such leadership we engineers will soon outstrip the doctors, the lawyers or any of the other professions, for I doubt if the publication of any other professional association would contain such a daringly significant statement as "the civilization of today, created by engineers, administered by others has created—a condition that cries out for change. The problem which is purely one of distribution cannot be solved by any but engineers." That is telling the world in grand style. Honestly I almost stood up and cheered when I read it.

More power to you. Keep hammering away along those lines and WE WILL solve the problem, and if a member in a temporary position, obtained through the society's unemployment committee and whose dues are being remitted for the time being can be of any definite assistance call on me.

PROGRESS OF REGISTRATION

Four States Added in 1935

Engineers' registration laws are now in force in 31 states. In these 31 states are located over 85 per cent of the engineers of this country. In addition to these states, the three possessions of the United States, Hawaii, Puerto Rico and the Philippines also have engineers' registration laws. The progress of enactment of engineers' registration laws dates from Wyoming in 1907 and New York in 1920 to Ohio in 1933 and New Mexico, Washington, Utah and Maine in 1935. More states are being progressively added to the list. Such legislation is now pending in 12 additional states, leaving only 5 states (of small engineering population) in which the profession has not yet decided to advance the registration movement. With the active impetus given to the movement by the National Society of Professional Engineers, more rapid progress may now be expected in extending registration to cover remaining states.

Over 45,000 engineers have already been registered in 31 states—over 12,000 in New York State, over 6,000 in California, and over 4,000 in Pennsylvania.

Following are the states wherein engineering is legally recognized and regulated as a profession:

Arizona	New York
Arkansas	New Mexico
California	North Carolina
Colorado	Ohio
Florida	Oregon
Idaho	Pennsylvania
Illinois	South Carolina
Indiana	South Dakota
Iowa	Tennessee
Kansas	Utah
Louisiana	Virginia
Maine	West Virginia
Michigan	Wisconsin
Minnesota	Washington
Mississippi	Wyoming
New Jersey	

SECRETARY LEGARE RESIGNS

Treasurer Conlon to Act

It is with regret that the American Engineer finds it necessary to announce the resignation of T. Keith Legaré, Secretary of the National Society of Professional Engineers, which was tendered to the Executive Board of the Society on April 8, and which became effective on April 15, 1935. Despite a strong plea from the Board, urging him to reconsider, Mr. Legaré advised that his decision was final.

After deliberation, the Board decided not to fill the post at this time. Mr. Willard S. Conlon, Treasurer of the Society, was appointed Acting Secretary and instructed to open headquarters in Washington, as of May 1, 1935. An announcement concerning the same appears elsewhere in this edition.

STATE ACTIVITIES REPORTED

Washington Passes Registration Act

The American Engineer again asks the several States to submit material for each issue. Every Society is invited, in fact urged, to present full reports of the activities of Chapters or affiliations. Correspondents are requested to forward news items immediately after meetings or occurrences take place.

IOWA

Ballots as of May 8th

The following excerpts are from an announcement sent to the membership of the Iowa Society by its Secretary-Treasurer, J. S. Dodds:

"*N. S. P. E.* On February 8th the Society voted to submit to the membership a ballot relative to joining the National Society of Professional Engineers.

A committee composed of O. W. Croft, C. H. Currie, M. P. Cleghorn, M. D. Blue and F. Ellis Johnson, has prepared statements to accompany the ballot.

All ballots received from members in good standing before May 8th will be counted.

District Meetings. District meetings are being arranged for Sioux City, Council Bluffs, Muscatine, Waterloo, and perhaps Fort Dodge and Marshalltown for dates early in April. As soon as dates are arranged notices will be mailed and members are urged to organize transportation units.

Ballot. Shall the Iowa Engineering Society Affiliate with the National Society of Professional Engineers? (Place X in the proper square):

( ) YES ( )NO

NOTE: A vote of "yes" authorizes the Board of Direction to revise the Constitution and By-Laws of the Iowa Engineering Society as follows:

(a) To add to Article II of the constitution the following section: "9. All members of any grade who are registered Professional engineers shall be members of the National Society of Professional Engineers".

(b) To add to Article II of the By-Laws the following section: "4. The annual dues of members of any grade who are registered professional engineers shall be $4.00 per year in addition to that specified in Section I of this article to provide for membership in the National Society of Professional Engineers".

Following are statements by proponents and opponents.

Reasons for Affiliation With N. S. P. E.

1. In union there is strength! The N. S. P. E. will not become just another Society but will form a federation of 48 state societies to give and secure new strength to all movements enhancing the Professional status of engineers. The fact that already the professional engineers serving the great populations of New York, New Jersey, South Carolina, Pennsylvania, Ohio, Connecticut, Illinois, Kentucky and West Virginia have chosen the National Society of Professional Engineers as a means of uniting for this common purpose indicates a going concern which the Iowa Engineering Society can not ignore.

(*Continued on next page*)

OHIO

Counties Organization Continues

On March 26th nearly three hundred engineers responded to a call for an organization of Cuyahoga County engineers. The minutes of the meeting which are appended were received too late for publication in the April issue.

"The Professional Engineers of Cuyahoga County met at 8:00 P. M. at the Hollenden Hotel at the call of John O. McWilliams and the following Committee:

Sol. A. Bauer, James Herron, F. A. Pease, F. C. Tolles, William Blaser, Wilbur Watson, William C. Kammerer, Wendell P. Brown, Robert Hoffman, C. N. Christian.

Mr. McWilliams introduced Mr. Perry T. Ford, Vice President of Ohio Society of Professional Engineers who discussed the importance of an organization on purely professional lines so that the Professional Engineers may better take advantage and protect the legal rights which were given to them under the Registration Act.

Mr. Ford called attention to existing House and Senate bills effecting Professional Engineers, and urged that we exert our influence with local State Senators and Representatives to defeat Senate bill No. 58 which exempts insurance companies from all provisions of the Registration Act.

In a discussion Mr. Ford answered many questions from the floor relating to registration.

On separate motions James H. Herron and William C. Kammerer were unanimously elected Temporary Chairman and Temporary Secretary.

On motion the Chairman was instructed to appoint a Committee to draft a Constitution. Mr. Herron announced that a Committee would be appointed within the next few days.

A request was made from the floor for Mr. Ford to discuss the National and State Societies of Professional Engineers. Mr. Ford discussed in detail the inter-relationship between the National, State and local Societies. He pointed out that in all matters of state or local concern the member Societies shall retain full autonomy. The National Society may recommend State legislation and procedure in the interests of uniformity and efficiency but action upon these recommendations shall be determined by Member State Societies.

Mr. Ford called attention to the New York State Supreme Court decision upholding the Dental Board in the revocation of a license for violation of their code of ethics on the manner of advertising. Mr. Ford cited that this was not a violation of the law but a violation of recognized professional practice.

(*Continued on page* 19)

WASHINGTON

Years of Endeavor Successful

From B. P. Thomas comes the following commentary on the new Registration Act of Washington:

"After many years of continuous effort the professional engineers of the State of Washington finally succeeded in having the Legislature pass an act requiring registration of professional engineers in this state. The act was signed by the Governor on March 18th, and goes into effect the first of January, 1936.

The success finally attained was due, no doubt, in large part to the fact that the engineers themselves got together and by organization of their various forces were able to convince the Legislature that a public demand really existed. The joint legislation committee composed of members from all the Societies and practically all of the engineer's clubs and organizations throughout the state, engineered the drafting and sponsoring of the bill. The mining engineers alone expressed the desire to be left out of this legislation.

Upon examination it will be noted that this act conforms quite closely to the model bill proposed by the joint committee. What variations exist were required to conform with the Washington Code which sets up an authority over all such matters as this, with the Director of Licenses in charge. Except for the amendments made on the floor of the Legislature the bill was passed substantially as proposed by the joint Committee".

Following are extracts from the law:

AN ACT

Relating to and regulating the practice of the profession of engineering and land surveying, defining the powers and duties of certain officers; providing penalities for violations thereof and making an appropriation.

Be it enacted by the Legislature of the State of Washington:

SECTION 1. DEFINITIONS

The term "practice of the profession of engineering" whenever used in this act, shall mean assuming responsible charge of investigating, reporting on, designing and/or supervising the construction of equipment, structures, utilities and/or projects, when the proper performance of such services requires technical engineering knowledge and skill, and shall include civil, electrical, mechanical, structural and/or hydraulic engineering.

The term "professional engineer" whenever used in this act, shall mean and include only a person who, through technical knowledge and skill, gained by education and/or by experience, is qualified to practice one or more of the above enumerated branches of the profession

(*Continued on page* 14)

IOWA

(*Continued from page* 13)

2. The National Society of Professional Engineers is the only national organization in which membership is limited exclusively to Professional Engineers—those who have been qualified by statutory authority and admitted to practice in the Engineering Profession.

3. The long time ideal of a great engineering profession united professionally but with technical interests taken care of by its divisions may be brought nearer to realization by the success of this new society. It can care for the professional interests as the technical societies are not now doing and can not do effectively as separate organizations.

4. While aiding so much toward the professional solidarity of engineers, affiliation with the N. S. P. E. would in no way hamper or curtail the activities nor tend to destroy the individuality of the Iowa Engineering Society.

"In all matters of state or local concern, the Member State Societies shall retain full autonomy" from constitution of N. S. P. E.

5. The registration of engineers in Iowa will become much more effective and significant immediately upon the affiliation of the Iowa Engineering Society with the National Society because a great number, especially mechanical and electrical engineers not now registered but in the employ of corporations, will consider that it is to their advantage to become registered in order to secure the fruits of this national movement.

No Resident of Iowa who is a registered engineer will be able to become a member of the N. S. P. E. except through membership in our State Society, if we affiate. This will inevitably build a greater State Society.

6. Contrariwise, if the I. E. S. does not affiliate, registered engineers of Iowa sufficiently interested in this national movement will become members of the national society. In self-protection in the matter of dues, and to secure the benefits of state-wide solidarity, they will undoubtedly form an Iowa "section" of the National Society of Professional Engineers which will result in reducing the membership in the Iowa Engineering Society as well as create an unfortunate rivalry of interest.

Arguments Against Affiliation With N. S. P. E.

1. The N. S. P. E. is neither a similar nor parallel organization to that of the American Bar Association or the American Medical Association because the N. S. P. E. is interested only in the so-called "Professional" interests of the engineer, while the A. B. A. and the A. M. A. are interested both in the technical as well as the professional development.

2. There are now at least ninety National Engineering Organizations which can be directed by a militant membership, not only to advance and protect the economic and professional interests of engineers, but also to promote consolidation.

3. The American Engineering Council now constitutes a central leadership, which can be made to function for the betterment of the economic and professional interests of the engineer.

4. Is it better for members of existing societies to force professional issues within present societies or form a new society for this purpose only? Results depend upon individual initiative and aggression. Simply joining another society will not bring results heretofore unattained by the same group of men.

5. A registered professional engineer member of I. E. S. not wishing to pay $4.00 to join N. S. P. E. will be forced to resign from I. E. S. This will reduce the membership of I. E. S.

6. Affiliation with N. S. P. E. will divide the I. E. S. into two groups. Registered professional engineers, and non-registered professional engineers. There will therefore be danger of serious disagreement over policies and actions.

7. A non-registered professional engineer, applying for membership in N. S. P. E. will be forced to pay $28.50 for state registration, $2.00 renewal fee per year, plus $10.00 a year more for I. E. S. and N. S. P. E. dues.

8. The American Association of Engineers was organized to accomplish the same identical objectives but has failed to produce results.

9. The New York, New Jersey, South Carolina, Pennsylvania, and Ohio groups are the only ones which have merged with N. S. P. E. with "non-optional" by-laws. This represents 5/48 of the possible state societies. Should the I. E. S. (founded 1889) a vigorous and healthy organization pay tribute to a new-born group which has reached only 5/48 of maturity?

10. The formation of a new National society divides the members of the profession, lessens the effectiveness of any one group, "scatters the shot" of individuals, and befogs national and professional issues with more officers, publications, and committees.

11. Mergers based upon engineering should result in lower costs and not increased dues.

Comments on Arguments Against Affiliation

1. The N. S. P. E. does parallel, far more than does Engineering Council, the Bar and Medical Associations. N. S. P. E., A. B. A. and A. M. A. comprise definite geographical or political units of their professions, not areas or zone units overlapping political subdivisions wherein laws and practices may differ.

2. There is not a single national agency, aside from the National Society of Professional Engineers, that, under the laws of 31 states and 3 territories, can be classed as a real professional body. Not even the founder societies can legally qualify as strictly professional groups. What must the remaining eighty odd consist of?

3. American Engineering Council is not composed of truly professional societies and does not represent a single agency composed entirely of legally qualified members of the profession. It has neither the background nor the right to represent engineers in social or professional matters. Is American Engineering Council responsible for any legislation recognizing engineers or benefitting the public? Has it in any manner legally raised the status of, or secured recognition, for the engineer?

4. This question proves the opponents' inability to appreciate the problems of the profession. In most existing societies a majority could not qualify under the law for the right to practice the profession. What would those who can qualify do; remain in or form a new society? Is it easier to consolidate ninety nondescript societies with ninety viewpoints than it is to organize one with definite objectives predicated upon legal premises?

5. This is correct. It is well answered in No. 6 of the proponents' arguments.

6. The very purpose of the professional society is to have one set of policies. Lawyers and doctors do not formulate for licensed and non-licensed members of their profession. Either they are licensed in accordance with law or they are not members of the profession.

7. Non-registered engineers are not eligible for membership in the N. S. P. E. What logic recommends that a man pay $25 for one year's membership in certain national societies which assures him of nothing, yet disapproves a single payment of approximately the same amount for the right to be legally and officially granted the privilege (denied those who cannot qualify or will not pay) to earn his livelihood as, and term himself, an engineer.

8. The American Association, after accomplishing in a few years more in the direction of social and professional advances, than the founder societies have in half a century, disintegrated because it could not survive half professional and half non-professional in membership.

9. There are nine states affiliated with the N. S. P. E. The number of legally recognized professional engineers in the country is approximately 45,000. The nine states in question possess practically one-half of the total number.

10. The opponent above states that there are at least 90 national engineering organizations. If so, how many state and local groups are there? Have not so many already scattered the shot and befogged the issue. Is there a single one dedicated to the professional, economic and social aspirations of engineers? Is there a single publication, aside from the American Engineer, which dwells entirely with such matters? The object of the N. S. P. E. is to place all professional and social problems within the scope of one agency. What chance is there of confederating countless societies when Iowa itself is not a unit in its opinions.

11. Membership in national, state and county units under N. S. P. E. is covered by one set of dues, not likely to exceed ten to twelve dollars per year. How does the same compare with $25 per year for membership in a single national society? Can membership in any other national society be secured for $4 per annum, including a monthly publication?

WASHINGTON

(*Continued from page* 13)

of engineering.

The term "practice of land surveying" whenever used in this act, shall mean and include assuming responsible charge of the surveying of land for the establishment of corners, lines, boundaries and monuments, the laying out and subdivision of land, the defining and locating of corners, lines, boundaries and monuments of land after they have been established, the survey of land areas for

the purpose of determining the topography thereof, the making of topographical delineations and/or the preparing of maps and accurate records thereof, when the proper performance of such services requires technical knowledge and skill.

The term "professional land surveyor" whenever used in this act, shall mean only a person who, through technical knowledge and skill gained by education and/or by experience, is qualified to practice land surveying as above defined.

The term "professional experience in engineering" whenever used in this act, shall mean experience had by a person, at least eighteen (18) years of age, which required original thought and responsibility and which began, as follows:

(a) In the field, when such person entered a position of responsibility equivalent to that of actual transitman.

(b) In the shop, laboratory, office or drafting room, when such person entered a position of responsibility and began actual original designing.

The term "professional experience in land surveying" whenever used in this act, shall mean experience had by a person, at least eighteen (18) years of age, which required responsibility equivalent to that of an actual transitman and began when such person actually entered a position of such responsibility.

Section 2. *Intent of Act*

From and after the first day of January, 1936, it shall be unlawful for any person to practice the profession of engineering or land surveying in this state, or to use in connection with his name, or otherwise assume, use or advertise, any title or description tending to convey the impression that he is a professional engineer of land surveyor, unless such person has been duly registered as a professional engineer and/or land surveyor, and holds an unrevoked certificate of registration, under the provisions of this act; *Provided,* That this section shall not be construed as prohibiting any person duly registered under this act as a professional engineer in any branch of engineering, from supervising any engineering work of another branch of engineering, or from making any necessary surveys, incidental to the prosecution of his work as a professional engineer, on any project of which he has responsible charge: *And provided further,* That this section shall not prevent the practice of the profession of engineering and/or land surveying by the persons hereinafter enumerated solely to the extent hereinafter specified, without registration under the provisions of this act:

(a) A person practicing the profession of engineering and/or land surveying solely as an officer, appointee or employee of the United States.

(b) A person practicing the profession of engineering and/or land surveying solely as an officer, appointee, employee, or contractor of this state or any county, city or municipal corporation in this state, during the term of his office or the period of his employment pursuant to an election occuring, appointment made, or contract entered into prior to the taking effect of this act.

(c) A person practicing the profession of engineering and/or land surveying not to exceed in the aggregate more than sixty (60) days in any calendar year, who is not a resident of, and having no established place of business in this state and who is legally qualified to practice the profession of engineering and/or land surveying in the state, territory or country of his residence in which the standards of qualifications are substantially those provided for registration under this act, or such a person having recently become a resident of this state and having been so qualified in the state, territory or country of his former residence, practicing the profession of engineering and/or land surveying after he shall have applied for registration under this act until such registration shall have been granted or refused as in this act provided.

(d) A person in the employ of an individual, co-partnership, corporation, or joint stock association who performs services, as a professional engineer or land surveyor, for his employer under the responsible charge of a professional engineer or land surveyor duly registered under the provisions of this act.

(e) A person duly registered and holding a certificate to practice architecture under the laws of this state, practicing engineering solely insofar as such laws permit him to do engineering work in connection with any building of which he is the architect.

But nothing in the foregoing proviso contained shall be construed to entitle any person therein specified to be considered a registrant under this act or to entitle such person to use in connection with his name, or otherwise assume, use or advertise, any title or description tending to convey the impression that such person is a professional engineer or land surveyor.

(f) A person rendering engineering services as an employee of a corporation when such services are undertaken in carrying on the general business of the corporation, and its general business does not consist either wholly or in part in rendering engineering services to the general public: *Provided,* That such corporation has at least one registered Professional Engineer.

(g) A member of the American Institute of Mining & Metallurgical Engineers.

Section 3. *Time and Place of Examination*

The director of licenses shall have the power and it shall be his duty, from time to time, to fix such times and places for holding examinations of applicants for registration under the provisions of this act, as may be necessary and convenient; to prepare and cause to be printed and to furnish to applicants, blank forms for applications for registration; to adopt and enforce general rules and regulations, not inconsistent with the provisions of this act, prescribing the method of conducting examinations and of approving, or rejecting, applications for registration, and to furnish all necessary postage, stationery, forms and clerical assistance required in the conduct of examinations or in the holding or hearings as in this act provided.

Section 4. *Examining Board*

Within thirty (30) days after the taking effect of this act, and from time to time thereafter, the governor, upon the request of the director of licenses, shall appoint an examining committee of five (5) members who shall conduct examinations of applicants for registration under this act. Each member of such committee shall be a citizen of the United States and shall have been a resident of this state for at least five (5) years immediately preceding his appointment, and shall have been engaged in the practice of the profession of engineering and/or land surveying for at least seven (7) years, and not more than two (2) members of such committee shall have been engaged principally in the practice of the same branch of engineering, and not more than one (1) member of such committee shall have been engaged principally in the practice of land surveying.

Section 5. *Qualification for Practice*

No person shall be eligible to registration as a professional engineer and/or land surveyor, under this act, unless he,

(a) Is a resident of this state or of a state, territory, or foreign country in which the requirements for the practice of the profession of engineering and/or land surveying are of a standard substantially equivalent to those of this act, and the state, territory, or country of his residence is authorized to grant equivalent reciprocal registration rights and privileges to registrants under this act; and,

(b) Speaks, reads and writes the English language; and,

(c) Is of good character and repute; and,

(d) Has had at least seven (7) years of professional experience in engineering of a character satisfactory to the examining committee, or, with respect to land surveying, has had four (4) years of professional experience of a character satisfactory to the committee: *Provided,* That each year of study in an engineering school of a standard satisfactory to the committee shall be equivalent to one (1) year of professional experience in engineering, but the total number of years of such study which may be so credited shall not exceed four (4) years, and each two (2) years of study in such school shall be considered equivalent to one (1) year of professional experience in land surveying, but the total number of years of such study which may be so credited shall not exceed four (4) years: *And provided further,* That each year of teaching of engineering as a full time instructor in engineering in an engineering school or college of a standard satisfactory to the examining committee, shall be considered as equivalent to one (1) year of professional experience in engineering and/or land surveying, but the total number of years of such teaching which may be so credited shall not exceed five (5) years for professional engineering, and shall not exceed three (3) years for land surveying: *And provided, however,* That any person who has been an actual resident of this state for at least one (1) year prior to the taking effect of this act and who shall establish to the satisfaction of the examining committee, by the affidavits of two (2) reputable citizens of this state, that he was engaged in the practice of professional engineering and/or land surveying, as herein defined, in this state, on the date of, and for one (1) year immediately prior to, the taking

effect of this act, shall be eligible to registration in his classification without examination, provided he make application for registration and pay the required fee prior to the first day of January, 1936: *And provided further,* That any person who shall prove to the satisfaction of the examining committee that he holds an unexpired certificate of registration, or its substantial equivalent, issued to him by the proper authority in any state or territory of the United States, or in any province of Canada, or in any other foreign country, in which state, territory, province or country the requirements for the practice of professional engineering and/or land surveying are substantially equivalent to the requirements for registration under the provisions of this act, provided the state, territory, province or country issuing said unexpired certificate is authorized by law to grant equivalent reciprocal registration rights and privileges to registrants under this act, may, on making application therefor and the payment of the required fee, and without examination, be issued a certificate of registration under this act. in the branch or branches of professional engineering and/or land surveying covered by his certificate issued by the authority of such state, territory, province or country: *And provided further,* That any person residing in the state of Washington and qualified to practice professional engineering and/or land surveying under this act at the time it takes effect shall be eligible to register under the terms of the act at any subsequent date on the same basis as if he had applied for registration at the time the act became effective: *Provided, however,* That any person not desiring to practice engineering and/or land surveying at the time this act becomes effective shall be required to qualify under this act and pay a qualifying fee of five dollars ($5).

Section 6. Applications for Registration

Any person desiring to register under the provisions of this act shall file with the state treasurer his application for registration upon a form to be furnished by the director of licenses, stating therein his name, age and place of residence and his qualifications for registration as provided in the preceding section, and the particular branch or branches of engineering and/or land surveying in which he desires to be registered, and accompanied by a certificate signed by two (2) or more reputable citizens of this state that he is of good moral character, and accompanied by a certified bank check or United States post office money order for the sum of fifteen dollars ($15); and it shall be the duty of the state treasurer on the next business day after the receipt of any such application and fee, to transmit the application, accompanied by his duplicate receipt for the fee, to the department of licenses, and to deposit in the state treasury to the credit of the general fund the balance of moneys received as advanced fees for registration on hand at the close of the preceding business day, after making all corrections and refunding all overpayments and other sums authorized by law to be refunded. Upon the receipt of any such application for registration under the provisions of this act, accompanied by the treasurer's duplicate receipt for the advanced fee, it shall be the duty of the director of licenses to examine the application, and if it shall appear to the satisfaction of the director of licenses that the application is in proper form and the applicant is eligible for registration, as hereinabove provided, to notify the applicant of the day and place of the next ensuing examination applied for, otherwise he shall return the application to the applicant stating his grounds for refusing the application, and in case the applicant is unable to show that he is eligible for registration shall authorize the state treasurer to refund the advanced fee.

Section 7. Conduct of Examinations

At the time and place fixed by the director of licenses for holding examinations for registration, the director of licenses shall transmit to the examining committee the applications of those persons who appear to the satisfaction of the director to be eligible for registration, and the examining committee shall prepare the necessary lists of examination questions to be submitted to the respective applicants for registration, and conduct examinations of all such applicants, except those found entitled to registration without examination, which examinations may be either oral, or written, or partly oral or partly written, and shall make and file with the director of licenses, lists signed by all the members of the committee conducting the examination, showing the names and addresses of all applicants entitled to registration without examination, and of all applicants who shall have successfully passed the examination, and the respective branch or branches of engineering and/or land surveying in which the applicants, respectively, are entitled to registration and showing separately the names and addresses of the applicants who have failed to pass the examination, together with all examination questions and the written answers thereto submitted by the applicants. Any applicant who shall have failed to pass the examination, may, after the expiration of six (6) months from the date of such failure, again apply for registration by examination. Each member of such committee shall receive ten dollars ($10) per day for each day spent in conducting the examination, and in going to and returning from the place of examination, and his actual and necessary travel and other expenses incurred in the performance of his duty as a member of such examining committee.

Section 8. Issuance of Certificate

The director of licenses shall issue to each applicant reported by the examining committee as having furnished satisfactory proof of his qualifications to practice professional engineering and/or land surveying, or as having satisfactorily passed an examination, a certificate of registration in such form as may be determined by the director of licenses and clearly indicating that the recipient is registered as a professional engineer and/or land surveyor, and unless said certificate be revoked for cause as in this act provided, is entitled to practice the profession of engineering as a civil, electrical, mechanical, structural, and/or hydraulic engineer and/or land surveyor, or any number of these branches of engineering or land surveying in which he has been found qualified as hereinabove provided, until the first day of January next following the date of the issuance of such certificate: *Provided,* That all certificates issued prior to the first day of January, 1936, shall, unless sooner revoked, entitle the registrant to practice until the first day of January, 1937.

Section 9. Corporations, Etc.

A co-partnership, or a corporation, or a joint stock association, may engage in the practice of professional engineering and/or land surveying in this state; *Provided,* That such practice is carried on under the responsible charge of one (1) or more registered professional engineers and/or land surveyors, whose name or names, and seal or seals shall appear on all official plans and other official documents, issued in connection with such professional practice.

Section 13. Use of Seal Required

The issuance of a certificate of registration by the director of licenses shall be evidence that the person named therein is entitled to all the rights and privileges of a registered professional engineer and/or land surveyor, in the branches specified in such certificate, while such certificate remains unrevoked, unsuspended or unexpired.

Each registrant under the provisions of this act, shall upon registration, obtain a seal of the design authorized by the director of licenses bearing the registrant's name and the legend "Registered Professional Engineer" and/or "Registered Land Surveyor."

No plans, specifications, plates, or reports issued by a registrant under the provisions of this act, shall be official unless sealed with his seal.

It shall be unlawful for any person to seal any documents with the seal of a registrant under this act if or after the certificate of the registrant named therein has expired or has been revoked, or while such certificate is suspended.

Section 14. Violations

Any person required by this act to become a registered professional engineer or a registered land surveyor who shall after the first day of January, 1936:

(a) Practice professional engineering and/or land surveying as defined in this act, or advertise, or hold himself out as a professional engineer and/or land surveyor, without being so registered; or

(b) Present or attempt to use as his own the certificate of registration or seal of another; or

(c) Willfully use or attempt to use a certificate of registration, or seal, after the certificate has been revoked or suspended, or has expired, shall be guilty of a misdemeanor.

Any person who shall give any false evidence to the director of licenses or to the examining committee, or to any member thereof, in obtaining a certificate of registration, shall be guilty of a gross misdemeanor.

NEW JERSEY

Executive Board Meets

The officers and trustees of the New Jersey Association met at the Hotel Douglas, in Newark, on April 11th.

Following is the report as submitted by the Secretary:

Minutes of the meeting of the Executive Officers and Board of Trustees of the New Jersey Association of Professional Engineers and Land Surveyors, held at the Hotel Douglas, Newark, New Jersey, April 11, 1935 at 8:00 P. M.

THE TULANE UNIVERSITY LIBRARY NEW ORLEANS

The minutes of the last meeting of the Board, February 20th, 1935, were read by the Secretary and approved as read.

The minutes from the last annual meeting held March 16th, 1935 were read by the Secretary and approved as read.

A motion was made by Mr. A. Trimpi of Morris County Chapter and duly seconded that the Association dues be received quarterly and that no one would be considered delinquent if they indicated their intentions by making payments in this way. The motion was passed.

Mr. G. W. Knight of Passaic County Chapter read a letter he had prepared entitled "Is it to be a Gesture" in which he endeavors to arouse some enthusiasm on the part of the licensed men who are non-members of the Association. A motion was made by Mr. George Randolph of Monmouth County Chapter that the President formulate a letter in the nature of an appeal to be sent out by the Chapter Secretaries with their due bills and by the Association Secretary to those members not coming within the confines of any Chapter. Motion passed.

The Secretary was instructed to proceed with the printing of membership cards, the expense to be opportioned to each Chapter according to its membership.

Several resolutions from the various Chapters were read by the Secretary. The first resolution from the Passaic County and South Jersey Chapters referring to the change in license classification to that of Professional Engineer was referred to the Legislative Committee.

On motion by Russel Wise of Passaic County Chapter and duly seconded by G. W. Knight, it was

RESOLVED that a Committee of Three be appointed by the President to meet with a similar Committee of Three from the Association of Architects to go over the bill covering the construction of buildings and arrived at a decision for the mutual protection of both professions.

President Goodkind appointed Russel Wise, Chairman, G. W. Knight and R. Hatfield as members of this Committee and advised the Secretary to advise the architects of our action and willingness to meet with them.

A resolution was read by the Secretary from the Passaic County Chapter recommending that the roster book be supplemented again this year and brought up to date. It was explained by G. W. Knight that it is the duty of the State Board to publish a complete list of the licensed engineers each year, so the Secretary was instructed to work along with Col. Hugh A. Kelly, Secretary to the State Board and make up a satisfactory arrangement, such as was made last year with him.

G. W. Knight brought up for discussion the rearrangement of the County Chapter structure in some parts of the State. It was suggested that the South Jersey Chapter be split up into two chapters, a Camden County Chapter and a South Jersey Chapter. It was also suggested that Mercer County should be given some study as there are many men not eligible to the Trenton Engineers Club that are deprived of Chapter Membership. Hunterdon, Somerset and other counties came up for consideration; however, the entire matter will be referred to the Membership Committee by the President for their investigation.

On motion duly made by Russel Wise and seconded, it was

RESOLVED to appoint Richard H. Lowe of the Passaic County Chapter to the position of Counsel to the State Association for the present fiscal year.

The Fees Schedule has been submitted with the minutes of the December 12th, 1934 Executive Board meeting to each Chapter Secretary. In the minutes of the February 20th Executive Board meeting, also in the hands of each Chapter Secretary, it is stated that the Salary and Fees Schedule would be held in abeyance until opinions and reports were received from each County Chapter. Many of the Chapters have not made such a report and the Secretary was unable at this time to submit this schedule for final action. (Chapter Secretaries please note). A motion was made by T. J. Powell of Union County Chapter that the Secretary be instructed to forward to the State Highway Engineer and State Highway Commission that part of the Schedule of Fees referring to State Highway Construction so they might have it available at this time. Motion was passed.

A communication from the National Society of Professional Engineers entitled "Engineers Urge Cabinet Post for Public Works" was read by the Secretary. After some discussion a resolution was made and passed instructing the Secretary to advise the National Society that the Board of Trustees heartily approve such a plan and that this Association will do all in its power to aid in its adoption.

President Goodkind read a copy of a letter he had written to our National Legislators representing this State in Washington relative to the appointment of Dr. D. B. Steinman, President of the National Society, to an important administrative position in our Works Relief organization in Washington. Replies were read from each of the two United States Senators and in each case the cooperation of the legislator was assured.

A letter was read by the President form Harold E. Wall, Manager of the Works Division, E. R. A., in which he suggested that an insignia be adopted that members can wear indicating membership in our Association. Mr. Wall offered to have one of his men make up several designs and get prices on such insignia. The Board agreed to accept Mr. Wall's kind offer and suggestion and instructed the Secretary to ask Mr. Wall to have the designs and prices for such an insignia ready to be submitted at the next meeting of the Board.

The time of the next annual meeting is set for January, 1936, and the place most acceptable to the Board will be Memorial Hall in Trenton. The President was instructed to appoint a Convention Committee to make the necessary arrangements. The President was also instructed to appoint a Convention Exhibit Committee. It was felt by the Board that much can be done in the way of exhibits after the accomplishments made at the last convention.

A Convention Competition Committee was appointed by the President for the judging of bridge or building structure designs to be submitted for prizes to be awarded at the Convention. Mr. George Andress was appointed Chairman, Hugh Clarke and G. W. Knight.

On suggestion of Hugh Clarke of Hudson County Chapter, the President appointed a Bowling Committee to arrange an inter-chapter schedule for next year: N. J. McGuinness, V. J. Scanlon, A. Trimpe, C. D. Bickley and A. M. Lee.

Meeting adjourned at 10:45 P. M.

(Ernest F. Weeks)
Secretary.

PASSAIC COUNTY

Holds 15th Anniversary

The value and influence of a Chapter were never more significant than in the recent anniversary celebration of the sons of Passaic.

Appended are excerpts taken from a report in the "Paterson Call" of the following day which devoted almost a page to the affair.

"Engineers of Passaic County Celebrate 15th Anniversary

Pen with which Governor Hoffman signed Bill 209 presented to Professor Kissam, at North Jersey Country Club

The Passaic County Engineering Society celebrated its fifteenth anniversary last night at the North Jersey Country Club with a successful dinner. Guest speakers at the affair attracted visiting engineers from practically every county in the state.

One of the features in addition to the many splendid speakers at the dinner was the presentation of the engraved pen with which Governor Harold G. Hoffman signed Bill No. 209. The pen was presented to Philip Kissam, assistant professor of civil engineering at Princeton University and head of the United States Coast and Geodetic Survey, by Gerald W. Knight, first vice-president of the state association. A letter from Governor Hoffman, in which he regretted he was unable to attend, contained praise for Professor Kissam and for the officers of the Passaic County Society of which Vincent J. Scanlan is the newly elected president. Bill No. 209 enables the engineer to designate property by means of uniform official survey, so that property thus described will be permanent and forever marked.

The program last night opened with a reception at 7 o'clock followed by music by the engineers' ensemble under the direction of Charles Rooney. The retiring president, Ernest F. Weeks, made the opening address following the dinner in which he welcomed the engineers and gave a resumé of the profession and the society.

Mr. Weeks said in part:

"We are here tonight celebrating the fifteenth anniversary of the founding of this chapter. It is not my intention to reminisce on the early struggles experienced by the organization, except to say that the Passaic County Chapter was the first of the county organizations of professional engineers to be formed—it was the pioneer group, and those of the first organizers who have the good fortune to be present tonight should glow with pride at this attendance. This banquet shows what can be accomplished through perseverance and continued effort. The professional engineers of Passaic County are beginning to realize some of the fruits of their efforts. We

have co-operated with the ERA administration, have made it our business to see that the unemployed engineer, member or non-member of our organization, got a job. In addition to helping the individual engineer get a job, the organization has worked towards cementing a closer tie between the individual practicing engineers. A uniform code of fees is being set up to eliminate 'chiseling'; a uniform salary code is being submitted to the highway commission, state and municipal governments on rates to be paid engineers for their services. The profession needs co-ordination of action and we are now endeavoring to reach a day when engineers will enjoy the same uniform schedules that the medical and dental professions have in force.

"As a profession it is evident that we are weak in national organization, and as a result of it have taken and will continue to take a beating until the entire engineering profession as an organized unit makes itself felt and heard. To the individual engineer I believe our present National Society organization, with its state and county underlying groups, is the answer. The fundamental conception of the National Society is 'service'—'service' to the individual engineer in employment and in organized representation of his rights. As I have said before, the Founder Societies serve a purpose but they are not in a position to cope with the present economic problems of our profession.

"To each engineer I say continue your membership in your Founder Society if you already belong, but it is my conviction that every engineer must become engineer minded for the advancement of his profession and to do the most good at this time should join his local chapter and the State Association of Professional Engineers.

"I wish to leave this last thought with you that our purpose is the advancement of our profession; there are no selfish individual objectives, but to be a force we need every one of the licensed professional engineers in this country as members.

"Think it over."

The newly elected president, Vincent J. Scanlon, the next speaker, presented a splendid verbal picture of the engineer and his profession.

The address of Mr. Scanlan in full follows:

"We live today amidst a new order of things. The changing order has affected almost every phase of our existence. The banking structure has been revised. Industry has been aided by legislation. Business has been assisted. Home owners have been helped. And other groups aided. While this has been going on we of the engineering profession have done little to revive, revamp or rebuild the engineering profession or its close ally, the construction industry. We have done little, too little, towards insisting upon the utilization of our natural resources, upon the creation of newer and better things.

"We have listened to the nation being told that we are overbuilt, that we need no more, that already we have built too much. Why this cry was heard by prehistoric man, by the cave dwellers. Overbuilt, they tell us. Overbuilt, while we permit reservoir sites to stand unused in the face of high rates and water shortages. We need no more. This, while our rivers are polluted by lack of sewerage facilities. We have built too much, this, while slums exist, traffic tangles increase and recreational centers are undeveloped; while our beaches wash away.

"My friends, I served as a member of your social committee last winter. Through the co-operation of the Emergency Relief Administration, engineers in need were offered work with that organization. Some of the stories of distress we heard are going to be hard to forget. Stories told by men high in the profession, by young men who could see no future for themselves; older men, rich in experience, all willing to work for any salary at any kind of work.

"I ask you tonight to see that this stops. I ask that you insist upon a fair salary. I ask that you demand that engineering jobs be run by engineers. I ask you to see to it that the engineer comes into his own. We have certain rights and from this day on we shall insist that they be respected."

Morris Goodkind, president of the State Society, was the next speaker and he briefly touched on the problems of the engineers.

The address of Mr. Goodkind in part was as follows:

"The interests and problems of human relationships are too widespread and interrelated to permit the engineer to stand by complacently and feel that he has done his part when he has supplied the technical requirements of his community. It has been his characteristic to circumscribe his activities within the limited sphere of his scientific specialty and leave to others the task of solving the multitude of questions which confront society in its endeavor to maintain its standing. This attitude has reacted to the disadvantage of the state and has brought disaster to the engineer himself. The true engineer possesses the inherent quality of vision, and by his training and experience has acquired the advantages of common sense, an aptitude for planning, a sense of sound analytical judgment, and a capacity for investigations.

"Are we, for example, doing our duty at the present time by our apparently apathetic attitude toward the unsuccessful efforts of our state government to solve its final problems, when organized bodies of all sorts are making themselves heard at Trenton, few of which are as well qualified as the engineer to render an unbiased analysis and studied justment of the feature involved. It is our responsibility as citizens and engineers to take an active interest in the government of our state and municipalities, and to offer whatever assistance may be available toward increasing their efficiency."

Following the remarks of the state president, Mr. Weeks, who served in the capacity of toastmaster, introduced Mayor John V. Hinchliffe, Republican County Chairman Alexander M. MacLeod. and others in the audience who stood and "took a bow."

One of the outstanding speakers of the evening, Bertram H. Saunders, former head of the Planning Commission of the City of Paterson, followed.

Mr. Saunders' subject was, "The Engineer, His Opportunities and Responsibilities in a Changing World."

He opened by referring to the book written by Charles Ferguson, a New York newspaper man some twenty-five years ago titled "The New Machine." In this writing, Mr. Ferguson had advanced the theory that our social economic and political problems could best be solved by engineering methods and advocated that the running of the country be turned over to engineers. The speaker quoted an article of his own in the American City Magazine of some ten years ago in which he had cited the benefits of water supplies, sewerage systems and the like, which engineers had bestowed upon communities and the still greater advantages to the people which could come from giving engineers a freer hand in carrying out their constructive work.

The speaker next referred to the severe effects of the depression upon engineers the country over, not only private enterprise but municipalities, counties and states under the pinch of financial necessity have had to curtail normal engineering undertakings. The construction of large buildings for office use, the development of factories, the extension of water supply, of transit lines, of railway facilities, the needed extension of sewerage systems have all been cut down to the absolutely essential minimum. The consequence is that of all the professions, unless it be the architects, engineering has been about the hardest hit and the general welfare of the people has greatly suffered by the stoppage of the various kinds of useful public services engineers are equipped to perform.

The presentation to Professor Kissam then took place followed by selections on the violin by Fred W. Loede. County Counsel Harry L. Schoen, as the final speaker of the evening paid a high compliment to the engineers who he declared were a monument to American progress. Mr. Schoen started his remarks by speaking of the old world and its three classes of men, classing the third man as the engineer or the builder, the man who is worth while.

Mr. Schoen's remarks in part were: "I greet you, the Passaic County Engineering Society, as the third class, the builders, in this community, who have accepted and selected your chosen profession to give to posterity something tangible, something definite—a monument to your memory, and therefore, I propose tonight to speak of "Those Who Do." George Washington, generally and truly the Father of this Country, was one of the first builders to advance civilization of these, our United States."

Mr. Schoen, then traced the engineer from the early, historical period of this country and continued with the growing of the country, the expansion and engineering work during and after the various wars of this nation. "The greatest work of the nineteenth century," Mr. Schoen said, "was the development of the railway system which has changed the face of the world. The telephone, telegraph, radio later were the nation's nerves." Engineers turned out to be the life-blood of the nation; bridges, canals, dams and other projects then followed and built up the country, declared Mr. Schoen.

In closing, Mr. Schoen said: "Oh, what a catastrophe it would be if this country were made up entirely of hibernators, those men in the first class that I discussed, who are satisfied to roam around in their own jungle, or of the destroyer, who takes what he can and runs for shelter, without having among us the doer, the builder, the man unselfish of his own personal rewards, who gives to the country that which remains after the donor has gone to his great reward."

The present officers of the society present were: Ernest F. Weeks, president; Vincent J. Scanlon, Vice-president; Russell S. Wise, trustee; Abraham Verduin, secretary; Isaac Levine, treasurer; and Richard H. Lowe, counsel.

The newly elected officers of the association are: Vincent J. Scanlan, president; Fred W. Loede, vice-president; Russell S. Wise, trustee; H. L. Bichford, secretary, and Abraham Verduin, treasurer.

The committee in charge consisted of Fred J. Wright, Fred W. Loede and Ernest F. Weeks.

PENNSYLVANIA

Architects Legislation Opposed

A controversy between architects and engineers relevant to the preparation and filing of plans for building construction, has arisen as a result of legislation sponsored at the request of architects of this State.

This controversy had its counterpart in New York. However, after several years of acrimony, during which time the New York State Society of Professional Engineers had built up its powerful county chapter units, the matter was amicably settled by extending full rights to both professions to the exclusion of unqualified persons. As a result the most friendly relations have been established and the two callings are united on all legislation.

The Pennsylvania Society is appealing to Engineers throughout the state to oppose the proposed legislation which would deprive the public of the services of the men most competent to protect life, health and property, viz. the engineer.

The following notice has been forwarded to every registered professional engineer in Pennsylvania.

YOUR RIGHT
TO PRACTICE
ENGINEERING
JEOPARDIZED!
H. R. BILL 1750

Introduced at Harrisburg by Mr. Ominsky, at request of Architects.

This Bill PROHIBITS Registered Professional Engineers from

1. Filing Applications for Building Permits.
2. Obtaining Permits for Same.
3. Designing Buildings.
4. Supervising Construction.

It is YOUR DUTY to PROTEST this Bill IMMEDIATELY to your Senator and Representative at Harrisburg.

This Bill MUST BE DEFEATED in order TO INSURE the continuance of YOUR PROFESSION.

PENNSYLVANIA SOCIETY OF
PROFESSIONAL ENGINEERS,
921 Widener Building,
Philadelphia, Pa.

Society Badge

A gold colored enamel badge ¾ inch in diameter similar to Founder Society Badges with Society seal thereon is ready for distribution.

Display of this badge will advertise the Society and build up our membership.

The price, $1.00 will assist in organization expense.

Badge will be mailed to you on receipt of One Dollar.

Address—Executive Secretary,
921 Widener Building,
Philadelphia, Pa.

CONNECTICUT

Selects National Director

The Honorable John F. Lynch, Senator from West Haven, has been chosen as the Director in the National Society from the State of Connecticut. The Society is to be congratulated on securing the co-operation of one who has already rendered signal service both to his commonwealth and to his profession.

Senator Lynch, who is President protem of the Connecticut legislature, has been engaged in consultory practice for many years and is conversant with the professional and social problems of the Engineer.

Registration

The legislation which would make Connecticut the 32nd State to adopt registration is at this writing still in the hands of the Judiciary Committee.

FLORIDA

Delays Action

Secretary W. W. Fineren has advised that the Committee appointed by the Florida Engineering Society to report on the question of affiliation with the National Society has recommended that the Secretary canvass the membership and study the financial obligations before action by the Society is taken.

In its report the Committee expresses the hope that President Steinman of the national body may find it possible to visit Florida for the purpose of outlining and discussing the problems of organization and action.

OHIO

(*Continued from page* 13)

Mr. Ford cited that there is now no recognized standard of professional engineering practice. A State Committee is now at work setting up standards of practice. They will soon be submitted to the local sections for consideration and adoption.

Mr. Ford called attention to the national convention of the National Society of Professional Engineers and the National Council of State Boards of Engineering—Examiners at Columbus, Ohio, October 22nd to 25th.

Meeting adjourned at 9:35 P M.
281 signed the register for attendance.

William C. Kammerer,
Temporary Secretary.

Interest in Emblem

Several engineers of Ohio have submitted designs for a National Society emblem. It has been suggested that the certificates should contain the emblem in the form of a seal.

Legislation

Four measures, in which the Society is vitally interested, are pending in the legislature. Engineers throughout the state are urged to contact Perry T. Ford, 1110 Wyandotte Building, Columbus, Ohio.

Applications Increase

More than 7,500 applications for registration have been filed with the State Examining Board. Patience is urged upon applicants as the task is a tremendous one.

Correction

In the March issue of the American Engineer, Item 4, Col. 2, Page 16, should have read:

"The time spent by many faculty members in class room is sometimes as low as ten to fifteen hours per week. This, we know is purposely made low so that the faculty members may engage in research, and properly keep abreast of the changes that are taking place. If the faculty members are permitted to engage in private practice, and give it the time required for detailed investigation and careful consideration, they must, of necessity, neglect their duties to their students."

KENTUCKY

Elects Steinman Honorary Member

The Kentucky Society of Professional Engineers, at the meeting of its Board of Directors, held on April 13th, elected President Steinman of the National Society to honorary membership.

Interest in the engineering New Deal is increasing and Kentucky looks forward to a strong well-knit organization of Chapters capable of making the influence of the engineer felt in public and official life.

ILLINOIS

Records Interest

From Illinois comes advices to the effect that interest in the National Society is increasing throughout the Middle West.

The spirit of co-operation and the appreciation of the circumstances which needs must accompany an initial endeavor, manifested in a comment from Secretary H. E. Babbitt of the Illinois Society, is indeed encouraging. Mr. Babbitt states that "much as one should like to see greater representation from the Middle West, it is essential in the present stage of development that the officers be grouped about the center of activities."

The National Society appreciates the need for the distribution of officers and directors and is anxiously awaiting the expansion of the Society throughout the country.

Illinois asks that certification of new members be promptly acknowledged. The secretarial incumbent will doubt less respond with all possible haste.

NEW YORK

By Raphael J. Smyth

Annual Meeting of the State Society

Notable interest throughout the State is being manifested in the Annual Meeting of the Society which will be held on May 18th, 1935, at the Hotel Roosevelt, Madison Avenue and Forty-fifth Street, New York City.

Details in preparation for this important event are being worked out by the following Committee on Arrangements: Mr. Arthur V. Sheridan, Chairman; Mr. Raymond J. Van Wagner, Bronx County Chapter; Mr. Linford S. Stiles, Kings County Chapter; Mr. Homer G. Balcom, New York County Chapter; Mr. Andrew K. Johnson, Queens County Chapter; Mr. Frederick H. Zurmuhlen, Richmond County Chapter; Messrs. Charles H. Sells and John Avery, Westchester County Chapter.

Governmental agencies, utility and transportation companies, educational institutions and engineering organizations will exhibit models and drawings of engineering works of exceptional magnitude and interest.

Outstanding representatives of governmental divisions and the engineering profession will address the meeting.

The meeting will be conducted in strict accordance with the following:

Order of Business

Exhibits

9:00 A. M. The display of exhibits will be held in the Oval Room of the Hotel. The same will be open for inspection from 9:00 A. M. until 6:00 P. M.

Morning Session

11:00 A. M, (sharp) Meeting called to order. Opening remarks. Appoint tellers. Charge Resolutions Committee.

11:15 A. M. Roll Call of officers. Minutes of previous meeting and communications.

11:30 A. M. Reports of Officers.

12:00 M. Reports of Committees.

12:30 P. M. Resolutions.

1:00 P. M. Adjourn for luncheon until 3:00 P. M. sharp.

Luncheon

1:15 P. M. Service.

2:00 P. M. Greetings and comments (by officials of the City of New York and of the National and State Societies).

2:45 P. M. Conclude luncheon.

Afternoon Session

3:00 P. M. Reconvene. Unfinished business.

3:15 P. M. Reports of Tellers and Installation of Officers.

3:30 P. M. Remarks of retiring and incoming Presidents.

3:40 P. M. New business.

Nomination of Officers and Directors
1935-36

President, John Charles Riedel; 1st Vice-President, Alfred E. Roche; 2nd Vice-President, Fred H. Zurmuhlen; Financial Secretary, Ernest F. Fox; Treasurer, Patrick M. Corry.

Directors (three years)—John Avery (Westchester); Charles W. Burke (Kings); Joseph F. Lamb (Bronx); Elmer C. Lawton (Albany); John L. Scanlon (Erie); Ole Singstad (New York); Edward E. Stickney (Broome); Walter H. Weiskopf (New York). Directors (two years)—Linford S. Stiles (Kings) (to serve unexpired term of Alfred E. Roche). Directors (one year)—James A. Pietsch (Richmond) (to serve unexpired term of F. H. Zurmuhlen).

A Valedictory Statement by President Arnold G. Chapman

To All Members of the New York State Society:

The Annual Meeting of the New York State Society of Professional Engineers, at the Roosevelt Hotel, New York, May 18th, marks the termination of my two years' incumbency as President of the Society. While these have been years of concern and uncertainty in nearly all walks of life, they have witnessed further progress in advancing the station of the professional engineer and of the land surveyor with the consequent greater public protection.

The accomplishments have been due to the interest manifested by the membership of this Society which should be participated in by many more who are eligible and financially able. Much remains to be done.

To the membership and officers, I therefore wish to express my appreciation for the individual and collective support and assistance in the past.

I urge your loyal support to the incoming officers and to the profession which support can in a measure be made manifest by securing new members, prompt payment of dues, attendance at meetings, submission of suggestions and recommendations, and otherwise active participation and cooperation.

You may be assured of my continued interest and cooperation.

Very truly yours,

Arnold G. Chapman,

President.

Legislation

Governor Lehman has signed the Dunnigan-McNamara Bill, amending Section 1461 of the Engineers' Licensing Law.

This amendment, which had the endorsement of the State Board of Engineering Examiners and the New York State Society provides, in part, that no corporation formed after April 15th, 1935, shall practice or offer to practice professional engineering or land surveying in this state, and that no corporation hereafter formed may use or assume a name involving the word "engineer" or "engineering," or any modification of such terms except a non-profit membership corporation composed exclusively of professional engineers. Engineering corporations which were previously organized and practicing engineering may continue to do so provided the chief executive officer of the corporation and all employees carrying on the actual practice of engineering for the corporation are licensed professional engineers. All corporation employees who are designated as "engineers" are also required to be licensed professional engineers. No existing engineering corporation is hereafter permitted to change its name or sell its charter or transfer its corporate rights without the consent of the State Education Department.

Assembly Bill, Introductory No. 1590, Printed No. 1736, was disapproved by the Governor.

The present law requires that all plans or specifications for the construction of any building or structure, or alterations to a building, be filed by a licensed architect or professional engineer. An exception, however, is made in the case of a building or structure costing $10,000, or less, containing not more than 30,000 cubic feet and in the case of an alteration costing $10,000 or less which does not involve changes affecting the structural safety of the building.

This bill would have limited the exceptions to buildings or structures costing $5,000 or less, containing not more than 15,000 cubic feet, and to alterations costing $5,000 or less.

Chapters as Clearing Houses

Mr. R. Suter, Executive Engineer, Water Power and Control Commission, made the following statement in a recent letter addressed to Dr. D. B. Steinman, President, National Society of Professional Engineers: "It is my belief . . . that a most valuable activity for the organized professional engineers will be to maintain a species of clearing house where prospective employers may go for a list of professional engineers available and skilled in the execution of the particular class of work contemplated. Were such an agency set up it would clear my office of numerous municipal delegations seeking my advice as to whom to employ or where the information can be obtained."

This is a service which could greatly benefit the public and Chapters; interested persons could secure names of men whose standing in the profession would guarantee competent service and fair dealing; members, however high their repute might be, would further gain by receiving the stamp of organized professional approval of their worth.

Congress Receives Society Petitions

The Congressional Record records the receipt by the clerk of the following petitions from the New York State Society:

No. 5481, ". . . . urging the preservation against loss of employment the existing civil-service personnel of state or municipal agencies receiving Federal loans or grants." Referred to Committee on the Civil Service.

No. 5482, ". . . . urging the creation of a Cabinet office of public works to be presided over by a professional engineer." Referred to the Committee on Ways and Means.

A Memorial to J. Waldo Smith

In 1917 the Catskill Water Supply System was put into operation. Costing over $200,000,000 it can supply New York City, from an area about 125 miles distant, with 650,000,000 gallons of water a day. It was constructed by the Board of Water Supply, of which J. Waldo Smith was Chief Engineer, and has been hailed as one of the greatest hydraulic engineering accomplishments of modern times.

An old triangulation tower, 30 feet square and 40 feet high occupying a splendid vantage point on the crest of a hill overlooks the Ashokan Reservoir, 12 miles long and nearly 200 feet deep, where the headwaters of the system are impounded before being released upon their long journey to the great city. Standing like a sentinel for a generation this tower has witnessed the development of this most important achievement

from its preliminary stages to its completion and operation.

Friends of Mr. Smith have conceived the happy thought of reconstructing this old structure to endure for generations to come and to dedicate it to his memory. The cost of this reconstruction is estimated at $5,000 which sum is being collected by a memorial committee, the chairman of which is Mr. Thaddeus Merriman who succeeded Mr. Smith as the Chief Engineer of the Board of Water Supply.

CHAPTER NEWS

Monroe County

Sixty-nine members and guests of the Monroe County Chapter held a dinner-meeting at the Powers Hotel, Rochester, on April 29, 1935.

Mr. Edwin A. Fisher, City Engineer Emeritus of the City of Rochester, the guest speaker of the evening, gave a highly interesting historical account of the development of the city's water supply system and illustrated by means of charts and diagrams the pressing necessity for the expansion of present facilities to meet the growing demands upon existing resources.

A continued and indefinite absence of Mr. Henry R. Blodgett from Rochester has made it impossible for him to properly carry on the duties of the office of Secretary-Treasurer and necessitated his regretful resignation. The Executive Board of the Chapter appointed Mr. John Hurlbut as Secretary-Treasurer to serve for the unexpired balance of the present term of office.

Much interest was manifested in the Annual Meeting of the State Society and in the development of the National Society.

Courtesy: Mr. R. H. Hendrickson, Acting Secretary-Treasurer.

Bronx County

Following the customary monthly dinner-meeting of the Executive Board the Bronx County Chapter held its business meeting at the Concourse Plaza Hotel on May 2nd, 1935.

There was assigned to a special committee under the chairmanship of Mr. George C. Shannon the work of registering all the licensed professional engineers of the County and the recording of their qualifications for particular classes of work so that the Chapter may act as a clearing house through which information relative to the capacity and availability of professional engineers in the County may be supplied to governmental agencies and prospective private employers.

The Committee on Municipal Power Plants, under the chairmanship of Mr. Solon E. Friedeberg, consulting mechanical engineer, is making a study of the subject of the construction of municipal power plants to supply the needs of the municipality and private industry.

The Chapter approved the report of the city-wide "Special Committee on the Standing and Salaries of Licensed Professional Engineers in Emergency Relief Agencies" with the recommendation that the schedule of salaries submitted therein be regarded only as an emergency schedule for relief purposes and that on the passing of the emergency the schedule of the Regional Committee be substituted therefor; and with the further recommendation that the classification of positions and titles be simplified.

The members present—upwards of 60—unanimously evidenced their intention of attending the annual meeting of the State Society on May 18th, 1935.

Westchester County

Announcement has been received, with keen regret, of the death of Mr. William A. Smith, Vice President and Director of the Westchester County Chapter.

Mr. Smith was born in Zanesville, Ohio, 54 years ago; he attended Marietta College; he served with the Missouri Pacific, Pennsylvania and New York Central railroads; he opened a consulting engineer's office in Tuckahoe in 1914; he was the Village Engineer of Tuckahoe and Bronxville at the time of his death.

He is survived by: his widow, Ray Adelaide de Puy; a son, Herrick de Puy Smith; and a daughter, Mrs. Thomas H. Simmonds.

Mr. Smith was one of the leading professional engineers of Westchester County, supporting the activities of both Chapter and State organization of Professional Engineers with interest, energy and enthusiasm. His passing will be mourned by the great number who held him in high and affectionate esteem.

Courtesy: Mr. Francis J. Laverty, Secretary.

Kings County

The annual meeting of the Kings County Chapter was held at the Brooklyn Engineers' Club on April 18th, 1935.

The following members were elected to office: President, Mr. John C. Riedel; Vice-President, Mr. Joseph A. Vertefenille; Secretary, Mr. Roy C. Cram; Treasurer, Mr. Otto Claussner; Directors for two years, Messrs. John J. Donegan; James F. Fairman, John E. Setchell, Edwin H.Thatcher, Clifford W. Valentine, Fred Wackenhut; Advisory Councillors, Messrs. Frederick Ward, Charles W. Burke, Robert S. Allyn, Edward A. Byrne, Philip P. Farley, Henry J. Kolb.

Mr. L. S. Stiles, Chairman of the Publicity Committee for the State Society Annual Meeting of 1935, has admirably organized his committee and is making thorough arrangements for effectively publicizing this important function.

Receipt of supplies by the Commissary has been reported: 40% of the members have paid dues for 1935. If money talks Kings has the gift of eloquence.

Courtesy: Mr. Roy C. Cram, Secretary.

New York County

The members of the New York County Chapter dined and transacted business at the Cornell Club on March 27th, 1935.

Dr. Ralph H. McKee of Columbia University delivered a thought-provoking address on the subject of "the future educational requirements for engineers' stressing the advantages of raising existing standards.

The following officers were elected: President, Mr. Homer G. Balcom; Vice-Presidents, Messrs. M. Deutsch, M. Goodman, E. A. Kingsley, J. W. Pickworth, and F. E. Schmitt; Treasurer, Mr. W. H. Yates; Directors, Messrs. R. M. Boynton, G. W. Fuller, G. A. Giorloff, T. H. Hamilton, J. L. Holst, H. M. Lewis, R. A. MacGregor, J. Mark, W. W. Reynolds, L. R. Waugh and G. C. Wheeler.

Appointed on a committee to consider revisions of provisions of the State Society constitution were: Messrs. George Pistor, Chairman, R. M. Boynton, J. L. Edwards, W. W. Reynolds and H. R. Towse.

A new Engineering Legislation Committee was appointed composed of Messrs. M. Deutsch, Chairman; R. M. Kendall and E. A. Kingsley.

Mr. Paul S. Holst died on April 20th, 1935, at the New Rochelle Hospital. He was the son of Mr. Jens L. Holst, a prominent consulting engineer and former engineer of Structures of the New York Central Railroad, who is a director and one of the most outstanding and respected members of the State Society. To the father and relatives of the deceased the heartfelt condolences of the New York County Chapter and the State Society are extended.

Courtesy: Mr. J. W. Pickworth, Chairman Publicity Committee.

Richmond County

Mr. William J. Massa, Chairman of the Publicity Committee of the Richmond County Chapter, has advised that a relief map outlining the proposed subway between Staten Island and Manhattan Island will be exhibited at the annual meeting of the State Society which will be held at the Hotel Roosevelt, on May 18th. This map won first prize at the Brooklyn Museum Exhibition held a few weeks ago.

Ulster County

Mr. George W. Codwise, President of the Ulster County Chapter, presided at the Chapter meeting which was held on April 8th, 1935, at the Governor Clinton Hotel, Kingston.

Mr. Walter E. Joyce, Consulting Engineer of the John Roebling's Sons Company, delivered a highly informative and warmly appreciated lecture on the historical development of suspension bridges in America passing from the Newburyport Bridge with its span of about 225 feet to the great Golden Gate Bridge at San Francisco whose cables, passing over towers 740 feet high, will suspend a central span for a distance of 4,200 feet at a height of 220 feet above the waters beneath. Reference was made to the world renowned Brooklyn Bridge—famous in song and story—which was completed in 1883; its central span is swung 133 feet above the surface of the East River between towers 1,595 feet apart and 276 feet high. A comparison between these two bridges affords a striking illustration of the tremendous development in the art and science of suspension bridge construction which has taken place during the last half century. The lecture was illustrated by motion pictures through the courtesy of Mr. Henry Millonig.

Courtesy: Mr. Edward P. Ward, Secretary-Treasurer.

Albany County

On April 15th, 1935, a meeting of Albany County Chapter was held at the University Club, Albany.

Mr. Benjamin K. Boyce, Chief Engineer of the New York Telephone Com-

pany—the guest speaker of the evening—discussed generally the fundamental basis of sound planning for major construction projects in the field of telephony. Such planning requires "long term studies" which, following the trend of industrial activity, permit a forecasting of future social and economic conditions and of the accompanying development of instrumentalities of service which such conditions necessitate. Mr. Boyce observed that many construction engineers who had entered operating departments of the telephone company had performed notably meritorious work and cited certain types of operating positions in which engineering training and experience are valuable assets. The discussion was concluded by the exhibition of a motion picture of novel methods employed in placing a buried cable between Syracuse and Watertown.

Courtesy: Mr. Francis X. Bode, Chairman Publicity Committee.

QUEENS COUNTY

In the middle of April there appeared in the public press a list of 63 TERA employees who were designated by engineering titles. The Queens County Chapter, making an investigation, found that the names of 34 of this number did not appear on the latest roster of licenses issued by the State Department of Education. At the direction of the Chapter, Mr. Frank Lilien, Chairman of the Committee on Law and Ethics, brought this fact to the notice of Mr. Robert Boyd, District Director, State Temporary Emergency Relief Administration, Mr. Oswald W. Knauth, Director of the Emergency Relief Bureau, Colonel William J. Wilgus, Director of the Works Division of the Emergency Relief Bureau, and, respectfully calling their attention to Article 55 of the State Education Law which makes illegal both the use of the designation "Engineer" and the practice of engineering by unlicensed persons, requested that changes in personnel or assignment be made as required for compliance with the law.

LICENSES GRANTED BY STATE OF NEW YORK

Altvater, Herbert G., 645 Pearl St., Elizabeth, N. J.

Anderson, Robert W., 30 King Ave., Weehawken, N. J.

Backston, Phil, 19 Mowbray Ave., Bay shore, L. I.

Bauman, Harold A., 241 Ascan Ave., Forest Hills, L. I.

Bardwell, M. Watson, 733 Euclid Ave., Syracuse, N. Y.

Beardslee, Nathan L., 686 E. 234th St., Bronx, New York City.

Beattie, William C., 2047 59th St., Brooklyn, N. Y.

Bedard, Joseph F., 8 Sutherland St., Pittsford, N. Y.

Beman, Myron C., 53 Granger Pl., Buffalo, N. Y.

Bengal, Morris, 5502 Fourteenth Ave., Brooklyn, N. Y.

Berliner, Sidney G., 14 Franklin Ave., New Rochelle, N. Y.

Bernhardt, Carl J., 15 Tremont St., Buffalo, N. Y.

Besha, Harold J., Brownville, N. Y.

Bloomquist, Erik A., 163 Boulevard, Passaic, N. J.

Boblow, Reuben, 52 Clark St., Brooklyn, N. Y.

Bouillon, Arthur M., care of Quartermaster, U. S. Army, Fort Hamilton, N. Y.

Bower, Marcy J., 152 Kuhl Ave., Syracuse, N. Y.

Bown, Ralph, 85 Pine St., Maplewood, N. J.

Brewster, William R., 285 Main St., Oneonta, N. Y.

Brooks, Raymond, 551 Fifth Ave., New York City.

Brunberg, Walter, 53 Coolidge St., Malverne, L. I.

Burke, Thomas V., 7420 88th Ave., Woodhaven, N. Y.

Burkhalter, Herbert E., 49 Merrimac St., Buffalo, N. Y.

Burrell, Randolph W., 47-16 156th St., Flushing, L. I.

Calmus, Abraham, 335 West Fourteenth St., New York City.

Carney, Edmund M., 601 Tenth St., Brooklyn, N. Y.

Carpenter, Oliver J., 2834 Whirlpool St., Niagara Falls, N. Y.

Carson, Robert J., 93-45 222nd St., Queens Village, L. I.

Cassap, William E., 367 Hoyt Ave., West New Brighton, S. I.

Cavarly, Haywood P., Jr., 48 Cedar Ave., Rockville Centre, N. Y.

Cerow, Joseph A., 102 Fenimore St., Brooklyn, N. Y.

Chamberlain, Antonio A., Glen Mary, Catskill, N. Y.

Chase, Ephraim, 8015 Bay Parkway, Bklyn, N. Y.

Ciccolilli, Peter R. 197 Carlton Ave., Brooklyn, N. Y.

*Clark, Edward S., East Worcester, N. Y.

Cohen, M. Mailloux, 2115 Quentin Rd., Brooklyn, N. Y.

Cole, Carter S., 520 West 114th St., New York City.

Cook, Robert S., 726 Gibson St., Canandaigua, N. Y.

Corneil, Ernest R., 211 Eighty-second St., Niagara Falls, N. Y.

Cornish, Arthur H., 3120 Bohre Ave., Bronx, New York City.

Covas, Perfecto A., 52 City Hall, Rochester, N. Y.

Cronin, John J., 2834 Heath Ave., Bronx, New York City.

Crosby, William L., 191 Berkeley Pl., Brooklyn, N. Y.

Cudroff, Henry M., 852 East Nineteenth St., Brooklyn, N. Y.

*Davis, Ralph E., 2545 Seventh Ave., New York City.

Daar, Samuel, 1244 Grant Ave., Bronx, New York City.

Dapson, Floyd L., 47-16 156th St., Flushing, L. I.

Davol, Osborne H., 536 Fourth St., Niagara Falls, N. Y.

DeBruin, William E., 20 Hamilton Pl., Hempstead, N. Y.

Diehl, Ray P., 1 Parkwood St., Albany, N. Y.

Dierman, Harry W., 855 Broad Ave., Ridgefield, N. J.

Dobson, William T., 143-15 Roosevelt Ave., Flushing, L. I.

Duna, Alfred L., 34 Cedar St., Nutley, N. J.

Duncan, Thomas C., 43-28 217th St., Bayside, N. Y.

Dundatscheck, Louis, 365 East 163rd St., Bronx, New York City.

Eisenstat, Samuel A., 1577 48th St., Brooklyn, N. Y.

Ericson, LeRoy, 21-38 Thirty-first St., Astoria, L. I.

Ertner, Harold S., 36-04 Twenty-first Ave., Long Island City, N. Y.

Evans, James N., 68 Montague St., Brooklyn, N. Y.

Eveleth, Lawrence N., 83 Snowden Ave., Schenectady, N. Y.

Ewig, Everett W., 100 Gibbs St., Rochester, N. Y.

Fasick, Burl J., 150-35 Seventeenth Road, Whitestone, L. I.

Feldman, Louis H., 482 Berriman St., Brooklyn, N. Y.

Fenneman, Ruurd G., 132-70 Sanford Ave., Flushing, L. I.

Ferris, Charles B., 758 North Broadway, Yonkers, N.Y.

Flynn, George W., 83 Third St., Troy, N. Y.

Fonda, James D., 1650 Astor Ave., Bronx, New York City.

Fort, Tomlinson, 64 Dartmouth St., Rockville Centre, L. I.

Fuller, Henry D., 10 Avery Ave., Alexandria Bay, N. Y.

*Gariss, S. Willis, 260 West Main St., Port Jervis, N. Y.

Gatsch, Herbert M., 318 East Tremont Ave., Bronx, New York City.

Gaussa, Gerard M., 945 Sherman Ave., Bronx, New York City.

Geyer, George, 51 West Eighty-seventh St., New York City.

Giardina, Anthony R., 404 West Twenty-third St., New York City.

*Gill, Robert D., 40 Maple Ave., Bay Shore, L. I.

Gillette, Robert W., 41-48 Parsons Boulevard, Flushing, L. I.

Gleeson, William S., 7101 Shore Rd., Brooklyn, N. Y.

Glendinning, William, 164 Parkside Ave., Brooklyn, N. Y.

Goettler, Arnold W., 126 Marvin Ave., Rockville Centre, N. Y.

Goetzman, Philip H., 902 Ninetieth Street, Niagara Falls, N.Y.

Gordon, Arthur, 165 Bennett Ave., New York City.

Graham, James H., 1502 Sausse Ave., Troy, N. Y.

Green, Leslie G., Box 218, East Greenbush, N. Y.

Guinan, John F., 295 Garfield Pl., Brooklyn, N. Y.

Haberer, Julien P., 142-46 Sanford Ave., Flushing, L. I.

Hagen, Vivian E., 628 East Seventeenth St., Brooklyn, N.Y.

Hager, Edward T., 224 Jefferson Ave., Niagara Falls, N. Y.

Halloran, Delavan, 447 Irving Ave., Brooklyn, N. Y.

Hashagen, John B., 121 Manhattan Ave., Jersey City, N. J.

Hedman, Aake F., 3233 Murray St., Flushing, L. I.

Henderson, Abram B., 45-32 149th St., Flushing, L. I.

Hepburn, Donald, 42 Prospect St., Flushing, L. I.

Hodgkiss, Arthur S., 35 Brooklyn Ave., Valley Stream, L. I.

*Holahan, Richard M., 42-09 191st St., Flushing, L. I.

Holten, Herman J., 32-15 157th St., Flushing, L. I.

Holzer, Ernest, 1065 Woodycrest Ave., Bronx, New York City.

Horton, Carroll T., 369 Elm St., Oradell, N. J.

Houck, Carl A., 166 Dart St., Buffalo. N. Y.

Hudowalski, Edward C., 82 Seventh Ave., North, Troy, N. Y.
Hull, Waldo S., 1670 Steuben St., Utica, N.Y.
Hunter, Colus C., 567 Riverside Ave., Elmira, N. Y.
Husselman, Roy, 310 Hippodrome Building, Cleveland, Ohio.
Hutchinson, Halbert C., 154 Westervelt Ave., Plainfield, N. J.
Izzi, Vincent A., 7609 Fourth Ave., Brooklyn, N. Y.
Jacobson, Jacob, 1800 Popham Ave., Bronx, New York City.
*Johnson, Carl V., 578 Seventy-fourth St., Brooklyn, N. Y.
Johnson, Edward L., 79 Grant Ave., East Rockaway, N. Y.
Kaup, William J., 260 Washington Ave., Brooklyn, N. Y.
Keenan, Edmond T., 957 East Twenty-second St., Brooklyn, N. Y.
Kennedy, Walter C., 151 Richmond Hill Ave., Kew Gardens, N. Y.
Kent, Samuel, 1658 East Seventh St., Brooklyn, N. Y.
King, John H., 35 Brooklyn Ave., Valley Stream, N. Y.
Kirkham, Edwin H., 169 South Broadway, White Plains, N. Y.
King, William V., 2012 East Twenty-first St., Brooklyn, N. Y.
Knight, William, 90-25 210th Pl., Queens Village, L. I.
Koch, Heinrich, 14 Livingston Court, West New Brighton, S. I.
Koerner, Fritz A., 618 East Twenty-first St., Brooklyn, N. Y.
Krause, Nathan, 1641 Baker St., Schenectady, N. Y.
Krejci, Edward J., 140-10 Franklin Ave., Flushing, L. I.
Kriger, Ralph S., 82 East Third St., Corning, N. Y.
Lang, Conrad H., 1538 Tibbitts Ave., Troy, N. Y.
Langner, Frederick W., 220 North First St., Olean, N. Y.
Lehr, Eugene L., 38 Lawson St., Hempstead, N. Y.
Leigh, Thomas K., 151 Crowell Ave., Staten Island, N. Y.
Leonard, Arthur V., Highview Ave., Norwalk, Conn.
Leopold, Charles S., 213 Broad St., Philadelphia, N.Y.
Linke, Alfred, 55 Midwood St., Brooklyn, N. Y.
Linn, Carl V., West Lane. Bayshore, N. Y.
Little, William S., 111 Plymouth Ave., Rochester, N. Y.
Lombardi, Americus, 169 Clinton St., Brooklyn, N.Y.
Luce, Arthur T., 726 Mountain Ave., Westfield, N. J.
McCabe, John V., 454 Eighty-second St., Brooklyn, N. Y.
McCarthy, Albert J., 291 McLean Ave., Yonkers, N. Y.
McCollum, John A., 560 West 165th St., New York City.
MacCorkle, David S., 42-66 Phlox Rd., Flushing, L. I.
McCrosky, Theodore T., 325 Bronxville Road, Yonkers, N. Y.
McDowell, Lewis G., 42-37 Union St., Flushing, L. I.
McKechnie, John D., Hillburn, N. Y.
McLaughlin, Edward D., 7 Allen Pl., Melrose, Mass.
Magan, John W., Jr., 2 Hillside Rd., Larchmont, N. Y.
Margolin, Samuel C., 725 Arnow Ave., Bronx, New York City.
Markson, Alfred A., 8216 Austin St., Kew Gardens, N. Y.
Maser, Herman G., 302 West Twelfth St., New York City.
Matullo, Silvio E., 1966 Matthews Ave., Bronx, New York City.
Mauro, Gasper M., 621 Sterling Pl., Brooklyn, N. Y.
Maxwell, Robert D., 71 Greenaway Rd., Rochester, N. Y.
*Medland, Albert E., 307 Rawlinson Rd., Rochester, N. Y.
Meinke, Howard G., 41 Harte St., Baldwin, N. Y.
Meurer, Sylvan T., 21746 Corbett Rd., Bayside L. I.
Meyer, Carl W., 172 Valley Rd., Montclair, N. J.
Miles, Raymond T., 22 Jefferson Ave., Rockville Centre, N. Y.
Minott, David J., 136-33 Nassau Blvd., Flushing, L. I.
Moog, George C., 140-40 Beech St., Flushing, L. I.
Moreland, William J., 2211 Fourteenth St., Troy, N. Y.
Morey, Charles V., 52 Charing Cross, Lynbrook, N. Y.
*Moss, W. Paxton, 56 Prospect Pl., Farmingdale, N. Y.
*Munson, Russell, 15 Halstead Pl., Rye, N. Y.

(*Continued in June Issue*)

ENGINEER APPOINTMENT

Approved by Press

The Washington Post of May 3rd, in commenting upon the appointment of Morris Llewellyn Cooke to the position of director of the rural electrification program, writes as follows:

A Promising Appointment

The phrase "rural electrification" conveys a somewhat vague impression to the average urban mind. Obviously it means carrying the advantages of electric power to isolated farms. But how shall this praiseworthy objective be achieved? Will the Government need to build new power plants? Will it sell electricity directly to impoverished farmers at less than production costs? What arrangements will be made to finance the purchase of electric equipment which the farmer can put to work?

Still more intangible are the underlying social and economic implications of such an enormous program. What effect will it have on the aggregate output of American farms? To what extent will this electric power displace human labor? Any attempt to think through the implications of this development reveals its magnitude. When the program is extended over 48 States of varying character the task becomes further complicated. To visualize it as an emergency undertaking capable of showing results in a single year, is still more difficult.

The Administration is especially fortunate, therefore, in securing as a director of the rural electrification program an engineer who is not only a competent technician but also a man of broad experience in the application of power to national economic problems. Morris Llewellyn Cooke went from engineering school to start on the bottom rung as a shipyard apprentice and journeyman machinist. Since then he has served as assistant engineer in the Navy, as a successful consulting engineer, as director of public works in Philadelphia, as chairman of the storage section of the War Industries Board. He was director of the Giant Power Survey for Pennsylvania in 1923, and chairman of the Mississippi Valley Commission of the PWA. More recently the Government has made use of his broad experience through the National Resources Board and the National Power Survey.

The appointment of Dr. Cooke—Lehigh made him an Sc.D. in 1922—to plan the rural electrification program imposes upon him even greater responsibilities than any he has heretofore exercised. But his record for public service insures that he will bring to the task insight, devotion, experience and well-balanced judgment. If this appointment may be regarded as a standard in the establishment of executives for the work-relief program, confidence in its constructive value will be substantially strengthened.

Comment:

How much more effective it would have been had Mr. Cooke participated in the making of the legislation. Even more valuable would have been an assignment to Mr. Cooke of a sufficiently large sum with which to study, plan and advise before the adoption of the legislative program.

ENGINEER AND ARTIST

(*Continued from page* 9)

mathematics of art and of its application to architecture, sculpture, painting, and the crafts to determine symmetry and interrelated proportion. Here, in the mathematics of art, may lie the key to why either the great university or the college of engineering would be a logical place for the art school of the future. Serious students of painting and sculpture, aspiring to great mastery of art, would find their way to an art school if instruction were based there on art's real foundation. We need have no fear that the school would attract but a few mildly interested idlers. And who knows but perhaps some classmate with other aptitudes may be he who shall become the Pericles of an American Age of Art?

Art is far more than expert wielding of brush or chisel. In the search for truth we are still led back inevitably to the Greeks of pre-Roman antiquity. To the great thinker of Athens, Plato, the true artist is the real philosopher; is the seeker after nature's ultimate wisdom; is charged with the high privilege of revealing that wisdom in all forms that our human senses can comprehend.

If our teacher be from Hellas, he tells us that the ultimate wisdom is named Mathenata and has four main divisions. He tells us that these are Astronomy, Geometry, Technea Mousikea (art of the muses), and all the study of our home, the earth, as Hygieia (science of right living).

In all these great domains he finds the deepest truth only in the simple ratios of numbers. He tells us that the periods of revolutions of the planets show us certain ratios; that the same ratios appear in geometry as the "silent scale" of design; that the harmonic scale of music is nearly the same but with certain differences since it is made entirely by the

factors 2, 3 and 5. In man's body he finds the pentagonal symmetry based on the "golden mean" ratio first read in the stars. But crystals and inanimate nature cannot reach that goal. Today we are accustomed to use decimals and write the ratio 1.618034; but to ancient thinkers it was 233/144 and the square of that ratio was written 377/144, or if one prefers as pi 5/6. This leads to pi as 377/120.

In the scale of design there are two sequences separated exactly by the ratio 2605/2048 or, as some say, by 4/pi. One of these sequences is derived from the square-root of 5 since the sum of its first values above and below unity is just that total; and for artisans, its whole-number proximations can be written:

ENGINEER ADMINISTRATORS

(*Continued from page* 12)

economic depression. It has been carelessly blamed for the breakdown of the industrial machine which it created but which others were administering. The engineering profession now asks for an opportunity to give its expert services in restoring the industrial machine and in its subsequent administration."

SOCIAL PROBLEMS AND ENGINEERS SOLUTIONS AND METHODS

The appended response of H. J. Fixmer to the appeal of Chairman J. S. Dodds of the Public Relations Committee is worthy of reproduction.

"Your enthusiasm-inciting circular letter at hand! During the lull in durable good industrial production, it occurs to me engineers should turn to the national free-for-all;—namely the solution of social, industrial and political problems! Many so-called panaceas have failed. Now is the time for those with authoritive background to take up the problem. Experiments have failed because those directing them had no experience in research, study, analysis or practical application of the trained experienced *engineering mind.*

The National Society of Professional Engineers should consider this. A professional engineer may engage in any field—provided he uses the *tools and methods* of his profession. He puts the research and results of scientific investigation to *practical use.* He approaches any problem impartially, and his guiding motive is *truth, reasonable cost,* and *practical efficiency.* Words alone will not do. Plans and action must be forthcoming. The situation can be analyzed. Starting with fundamentals we can ask and answer many questions. What *are* the functions of government? How shall society and industry be regulated, controlled or divided? Have we men in our organization ready, able, and willing to do this? A demonstration of the engineering solution of any, or all, national problems, would be a most welcome event, and surely would react in establishing the importance of the engineering profession. I am planning an article on this subject, but as yet do not know when or where it will be published.

I believe we ought to concentrate on government administration, from local up to national. Your efforts I hope, will bear fruit. I shall try to co-operate in any way."

Note: The American Engineer invites participation in the National free-for-all. Reasonable proposals, if well written, will be published.

Editor.

CONTRACT OR RELIEF WORK

(*Continued from page* 5)

Social solons are still dominant in the personnel set-up to administer the works program. Frank C. Walker, Harold L. Ickes and Harry L. Hopkins are the three key men; the first will head the Division of Applications and Information through which agency all projects must be cleared; the second, as head of the Works Allotment Division, will select the projects from those which the Clearing house passes, and the third, a Social Administrator, is to supervise progress, —a job calling for an engineer or a contractor.

However, the presence of certain new influences in Washington inspires hope that informal discussions now in progress may open the door for a modification of procedure. In support of this hope every State Society is urged to record itself and forward to the headquarters of the National Society a recommendation on the subject of contract as compared to work relief. The recommendations will be transmitted personally to a source where the same will receive consideration. There is nothing in the new appropriation bill which prevents a change in methods. This is at least an opportunity. Every Society should respond as quickly as possible.

PATRONIZED AND EXPLOITED

(*Continued from page* 8)

ties of employment are not conducive to any great degree of independence.

The newly graduated engineers may perhaps secure employment with contractors in which employment they will be permitted to work all hours of the day and night to make larger profits for their employers, who in return will discharge the engineers just as soon as their services can be dispensed with.

Even in some of the largest contracting firms, engineers are laid off one day and taken back the next, like laborers or mechanics, when their presence is not absolutely necessary, in order to save a day's pay for the employers. This does not mean that the engineers and the mechanics are in the same class, for generally the mechanics get more money. The writer recalls a specific instance wherein a young engineer who in boom times was a chief of party laying out footings for a five-and-a-half million dollar building, for $45.00 per week of five days. The dockbuilder foreman who supervised the placing of the piles, as laid out by the engineer, received $80.00 for five days. Since the nature of the job necessitated working Saturdays and Sundays, the foreman was paid double time, or $32.00 per day, for such overtime work, while the engineer, being a professional man and not so mercenary as the foreman, worked the extra two days for nothing. The rude, uncultivated foreman who was a member of no professional societies but who did happen to belong to a union received $144.00 for such a week's work, while the more cultivated engineer, who had wasted his early youth in college, received only $45.00. Of course, in these hard times, engineers can perhaps derive some sort of consolation from the thought that the mechanics who earned such high salaries in other days must feel the depression much more keenly than the engineers, who never did earn much. Yet, even under present conditions skilled mechanics have been receiving at the rate of $12.00 and $13.00 a day on relief work, while engineers have been paid $5.00 a day or even less.

The mechanics are able to demand good salaries, we are told, because they are organized. But the engineers are organized too! They have their engineering societies and have had for many years. Why is it that the engineers have not been able to attain what the mechanics have? Simply because the old engineers' societies are not organized for the economic welfare of their memberships as are the labor organizations. The professional societies are interested in only technical and ethical standards. Such interests are indeed laudable, but discussions on the ethical practice of a profession are not likely to prove highly interesting to members who lack the opportunity to practice the profession at all, and unemployed engineers might be less interested in a lecture explaining how to find torsion and flexure in a beam than in a talk telling them how to find bread and beans in the pantry. The professional societies, however, have not ignored economics entirely. When the opportunity presented itself, they forgot technical discussions and ethics, particularly ethics, and offered a code for engineers with a minimum salary of 40c per hour. Never let it be said that the economic welfare of engineers was entirely neglected. The same professional brothers who proposed the 40c-per-hour pay also sought to work into the code a provision to prevent engineers from practicing certain types of engineering work unless they were already entrenched in the field. Now this was real protection—protection for those who wrote the provision.

It cannot be claimed that the engineer has not advanced his economic standing because of his altruism, his humility or his charity. Never believe that he is "too full o' the milk of human kindness" to be self-seeking. It is largely because of the engineers' narrowness and selfishness that the profession is in its present state. It is their short-sightedness and personal self-interest that thwarts efforts to get them to act as a group. Even in small groups banded together for their own economic interests there are disrupting dissensions. The young men cry out against the older men, those in independent practice view with suspicion those in salaried positions, the engineers in private employ look askance at those in public employ, and vice-versa. When a tentative schedule of salaries was presented to a certain group for approval, one broad-minded engineer was heard to ask why a rate for unlicensed sub-professional engineers was included. Another cried out in alarm lest adoption of such a schedule might interfere with what he regarded as his inalienable right to pay his assistants little or nothing.

The most vicious exploitation that engineers suffer is generally at the hands of members of their own profession. Engineers who attain high positions no longer have the same interests as the engineers below them. Upon promotion their interests merge with those of the

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management. Industrialists seek a maximum profit from their investments, which profit is enhanced by cutting wages. Engineers in managerial positions devote themselves to piling up greater profits for their companies. This entails grinding down the help, including the engineers in lower positions. Since the managerial engineers are familiar with engineering work, they can more effectively sweat their fellow-engineers than anyone else, and this they do. Since the vast majority of engineers are employees rather than private practitioners, the profession becomes involved in the inevitable conflict of interests between employees and employers. Some engineers incline to the belief that it may yet be necessary to resort to the strategical tactics and weapons of labor in order to enforce rights.

When engineers do form organizations for their own benefit, these organizations eventually fall into the control of managerial engineers whose economic interests are antagonistic to those of the majority of the membership. This is an unfortunate but a natural tendency, for the more outstanding members in the higher positions are better known and, therefore, in a better position to be elected to office. Then too, an engineer with a great many employees under him can generally command their support at society elections. This tendency concentrates control of such organizations in the hands of engineers not in sympathy with the desires of the rank and file of the membership or of the profession as a whole. Thus it is that one encounters such a paradox as a professional society whose membership is predominantly composed of employees, as is the engineering profession, fostering a code which provided for a 40c-per-hour minimum wage for engineers. This was a result of the concentration of control in a small selfish employer group, no longer representative of the interests of the membership, as a whole.

In spite of the many difficulties attendant upon such a task, the work of organizing the National Society of Professional Engineers, now being carried on under the able leadership of Dr. David B. Steinman, Mr. Arthur V. Sheridan, and others who though staunch opponents of radicalism are preaching a social and professional philosophy as part of the engineers' creed, is showing most encouraging results in bringing about professional solidarity. When engineers learn to act as a group, and to carry forward an aggressive campaign for adequate professional recognition, showing themselves to be a really vital force in society, instead of an aggregation of inarticulate robots and automatons ready to do the bidding of any taskmaster with the means to pay a starvation wage, then will the profession cease to be a social Cinderella and then, only, will engineers take their rightful place in the sun. This, the writer believes can be done. He trusts he is not day-dreaming, Professor.

CODES FOR SOCIETY

(*Continued from page* 11)

(2) He shall retain, as personal property, all original plans, specifications, designs, studies, patents and other engineering data developed as a result of his work, unless an agreement to the contrary has been entered into with client or employer.

(3) He is charged with the exercise of quasijudicial functions in matters of dispute and his position shall at all times be that of an impartial arbiter.

(4) He shall recognize the limitations of his qualifications, and shall, where advisable, consult, retain or co-operate with experts and specialists, whether members of his profession or otherwise.

(5) He shall not seek to hold out the work of others as his own and he shall not render professional services to persons or groups who refuse to credit him with such services.

(6) He shall assume responsibility for, and wherever possible shall sign, professional work performed by him or under his direction.

(7) He shall bear in mind the undesirability and danger of rendering professional services for contingent fees.

(8) He shall maintain a dignified interest in the affairs of the community and shall advise and co-operate generally with those interested in, or concerned with, matters of an engineering character which are pertinent to the public welfare.

(9) He may establish, where and within limits desirable, schedules, classifications and other criteria for the guidance of the public or members of the profession.

ENGINEER AND ARTIST

(*Continued from page* 9)

8 13 21 34 55 89 144 233 . . . expressing linear measure. Fifteen steps above and below unity the sequence reaches the ratios 4/3 and 3/4 which are the beginning of our musical scale. The other sequence, derived from 5, extends from the ratio 5/2048, located exactly 13 steps below the middle, upward by 26 steps to the ratio 2048/5, and can be proximately expressed: 7 12 19 31 50 81 131 212. . . . This Pair of ratios are the ancient HIEROS or "sacred reciprocal ratios." Both ratio sequences are found in the great works of art in pre-Roman antiquity. They are the key to nature's symmetry in man's art. They survived in scattered and obscured form through the centuries, and appear again and again in the proportions and symmetry of the arts in such great eras as the Middle Ages and the Renaissance.

This deepest truth that lies only in the simple ratios of numbers is of an importance that far transcends art itself. If Plato's reasoning be correct, there can be no happiness, no "peace that passeth understanding" in technical training nor in the entire mass of petty facts that are taught today as substitutes for the ultimate wisdom. Therefore the practice of art should be included in all other study.

The elements of ancient symmetry, the scale of design and the symmetry of the human body, the latter disclosed by the pentagon pose at the moment of inhalation, are in the course of being recovered today. Of the importance of bodily symmetry, Vitruvius wrote in De Architecura, Book III, C. 1: "For without symmetry and proportion no temple can have a regular plan; that is, it must have an exact proportion worked out after the fashion of the members of a finely shaped human body." There is promise that soon these parts of the ultimate wisdom will be sufficiently explicit for elemental use in art education, as a basis for supplementary training in technics that assure permanence and in all other principles of visual art known to modern masters of art. Our colleges would do well to give serious consideration to the establishment of art schools where such complete instruction would be given. If we can hope for a millenium, it would be in our colleges that the artist and his comrade, the mathematician, would again be the guests of honor in the house of life of space and time.

In art, moreover, lies inherent an importance but little realized by many among the alumni of the Polytechnic Institute. One of America's foremost historians, Professor Albert T. Olmstead of the Oriental Institute, University of Chicago, has stated that historians depend largely on the art of a past period in judging the level of civilization reached by the people who produced that art. Last fall Dr. Foster Kennedy, F.R.S. (Edin.), a New York City neurologist whom all hold in highest regard, opened his address at a dinner tendered to honor Dr. Bailey Ashford at the Harvard Club, New York with these words: "Let us now praise famous men that their light may go forward evermore. In civilization, such as we still have, there are indeed but three kinds of men who can merit the appellation of greatness: First, the artist, Second, the worker in the pure sciences—perhaps, above all, the mathematician, Third, the physician."

If this be the artists' real place in the sun, be it understood that "greatness" applies only to true original artists, thoroughly trained in the fundamentals of art, expert craftsmen with brush or chisel, who create works fitting to their day and environment; and that greatness in art is made manifest usually when an understanding Pericles opens the door of opportunity to highly trained artists by giving important commissions to artists who are, preferably, his fellow-country-men—another reason why the practice of art should be included in all other study, art being the thing we can comprehend the quickest, and can afford to lose the last.

An art school at a university or at an engineering college need not be, therefore, something trivial, where mildly interested idlers are encouraged to become dilettantes. It could supply that close contact with the modern equivalent of the medieval schoolmen, something which contemporary artists, as a rule, do not enjoy either during their years of training or when working professionally. There is no doubt but that art in America is poorer because of the gulf that now separates our intellectuals, our engineers and the artists. In such an art school is the promise of a rebirth of ideal collaboration by all responsible for and engaged in carrying out important art projects.

If we would be of the highest service to art and to America, then by all means let us have some day art schools in our universities and colleges. Let our engineers remember their essential brotherhood with artists. To belittle art tends towards barbarism. The rediscovery of art may bring in another Renaissance.

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